The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2180.—VOL. XLVII. LONDON, SATURDAY, JUNE 2, 1877. [WITH SUPPLEMENT. {PRICE ..... SIXPENCE. PER ANNUM, BY POST, £1 4s.}

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

...ESS transacted in all descriptions of MINING Stocks and Shares (British Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Miscel... Insurance, Assurance, Telegraph, Shipping, Canal, Gas, Water, and ... Shares.
...ESS negociated in Stocks and Shares not having a general market value.
...ESS in COLLIERY and IRON Shares, and in the principal WAGON and ...FACTURING COMPANIES of the NORTH of ENGLAND and SCOTLAND.
...ESS in all the principal COTTON SPINNING Shares.
...ESS in all the principal CORRESPONDING AGENCIES in all the ... J. H. CROFTS, having now established CORRESPONDING AGENCIES in all the ...F TOWNS of the United Kingdom, is prepared to deal in the various LOCAL ...s and Shares at close market prices.
Accounts opened for the Fortnightly Settlement.
Monthly and Daily Price Lists issued.
Bankers: City Bank, London; South Cornwall Bank, St. Austell.

...CIAL DEALINGS in the following, or part:—

Ashton, £1 13s. 9d.	10 East Van, £4 17s. 6d.	15 N. Zea. Kap., 28s. 9d.
Aberdaunant, 13s. 6d.	15 Eberhardt, £7 5s.	10 Pateley Bridge, £2 7 6
Blampfylde, 8s.	25 Flagstaff, £2½.	50 Pestarena, 4s. 3d.
Cathedral, 19s.	10 Great Laxey, £21.	25 Parys Mountain, 8s. 6
Chicago, £3½.	20 Glyn, £1 1s. 6d.	20 Penstruthal, 9s. 9d.
Clementina, £44 5s.	20 Holmbush, £1 12s. 6d	25 Pennerley, 8s. 9d.
Chontales, 8s.	50 Javali, 8s.	10 Roman Grav., £11 x d
Combinartin, 8s.	10 Llanrwst, £3¼.	50 Rookhope, 19s.
Condes of Chili, £4.	10 Llangan, £5¼.	10 Tankerville, £7 5s.
Derwent, £2½.	10 Leadhills.	20 Van Consols, £1 17s 6d
D'Eresby, £18½.	10 Monydd Gorddu.	10 W. Tankerville, 19s.
Exchequer, 11s. 3d.	50 North Laxey, 16s.	10 W. Tank. Pref., £2½.

, Shares sold for forward delivery (one, two, or three months) on deposit of 20 per cent.

FOREIGN BONDS—ARGENTINE—EGYPTIAN—RUSSIAN, TURKISH. SPANISH. PERU.
RAILWAYS—HOME and FOREIGN.
SPECIAL BUSINESS in the above, and Fortnightly Accounts opened on receipt ...e usual cover.
, THE WAR.—The latest Telegrams from the SEAT OF WAR are received ...ughout the day, and also the course of the Markets from EVERY CONTINENTAL ...TRE.
JAMES H CROFTS, 1, FINCH LANE, LONDON.

AQUARIUM, HOTEL, INSURANCE, AND MISCELLANEOUS SHARES.
SPECIAL BUSINESS in Brighton Aquarium, Royal Westminster Aqua... Yarmouth Aquarium, Crystal Palace Aquarium, Milner's Safe, Telegraph ...truction, Royal Insurance, Positive Assurance, Credit Foncier, and others.
, BUSINESS TRANSACTED in all MISCELLANEOUS SHARES (of whatever description) having LONDON or COUNTRY MARKET VALUES.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

BRITISH LEAD SHARES.—BUSINESS in all leading Market ... Mines and Latest Special Information from the various districts.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

COAL AND IRON SHARES.—BUSINESS in all the ... PRINCIPAL SHARES and DEBENTURES.—FOR SALE:—

...Altami.	20 Cakemore, £2¼.	20 W. Cumberland, £7½
...Cardiff & Swan., 3½ 3	20 Chapel House., £2¾.	

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

COTTON SPINNING SHARES.—BUSINESS in all OLDHAM ... SHARES, and in those of other DISTRICTS.
, SPECIAL BUSINESS in the following SELECTED SHARES:—

Name of Mill.	Last four dividends, per cent.	Closing quotations. June 1. Buyers,	Sellers,
Central	26, 20, 10, 10	... £ 2¼ ...	£ 3
Greenacres...	30, 20, 5, 15	... 3½ ...	4
Green Lane	25, 30, 25, 20	... 60 ...	65
Oldham Twist	32, 26, 12, 15	... 20 ...	25
Royton	30, 20, 10, 10	... 2¾ ...	2½
Shaw	20, 16, 10, 16	... 2½ ...	3
Star	25, 20, 8, 14	... 2½ ...	3
Windsor	26, 20, 10, 16	... 2½ ...	3

NOTE.—The shares of good Cotton Spinning Companies pay remunerative dividends, the mills being almost entirely conducted on the Co operative System, under the Limited Liability Acts. With a revival in trade the present rate of dividends would be augmented.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.
Bankers: City Bank, London; South Cornwall Bank, St. Austell.
ESTABLISHED 1842.

MR. WILLIAM H. BUMPUS,
STOCK AND SHARE BROKER,
44, THREADNEEDLE STREET, LONDON, E.C.
[Established 1867.]

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

IMPORTANT.—In consequence of the existing general depression, the Shares of several Sound Dividend and Progressive Mines may now be obtained at prices which are very much in favour of purchasers, and investments made at the present time in this direction will, in all probability, yield very satisfactory results within a comparatively short period. A reaction must take place before long, and those who secure well selected Shares now will be enabled to realise large profits.
Shareholders, intending investors, and others who may be desirous of obtaining information and advice as to operations at the present time are requested to communicate.
SPECIALLY RECOMMENDED—Argentine, Condes of Chili, Blue Tent, and Gorsedd and Merllyn, full particulars of which may be obtained on application.

FOR SALE, at prices annexed:—

75 Almada, 6s.	20 Flagstaff, £2 11s. 3d.	15 Pateley Bridge, £3½.
20 Argentine.	15 Frontino, £2 8s. 9d.	50 Parys Mount., 9s.
80 Aberdaunant, 13s. 9d.	60 Gt. West Van, 6s. 9d.	100 Pestarena, 6s.
25 Assheton, 32s.	35 Glyn, 28s. 6d.	20 Pennerley, 8s. 9d.
30 Blue Tent.	25 Glenroy, 19s. 6d.	60 Port Phillip, 12s.
40 Birdseye Creek, 13s 6d	10 Grogwinion, £4½.	15 Roman Grav., £11¼.
20 Condes of Chili.	10 Hingston, 13s. 6d.	50 Rookhope, 19s. 6d.
15 Chicago, £3½.	40 I.X.L., 15s. 6d.	20 Richmond, £6 16s. 3d.
100 Chontales, 8s. 3d.	75 Javali.	40 San Pedro, 1's.
20 Cedar Creek, 11s. 6d.	20 Kapanga, 32s.	10 South Condurrow.
60 Don Pedro, 10s. 6d.	10 Leadhills.	20 Tankerville, £6¾.
10 Derwent, £2 18s. 9d.	25 Marke Valley, 21s.	10 Van, £34.
70 Exchequer.	30 N. Quebrada, £2¾.	30 Van Consols, 37s.
10 East Van, £4 19s. 6d.	50 North Laxey.	15 Wye Valley.
15 Eberhardt, £7 3s. 9d.	80 Prince of Wales, 2s.	20 Wheal Grenville, 23s.
80 East Caradon, 18s.	40 Penstruthal, 11s.	25 West Tankerville.

WILLIAM HENRY BUMPUS, SWORN BROKER.
Offices: 44, Threadneedle Street, London, E.C.
Business transacted in Stock Exchange Securities and Miscellaneous shares of every description. Fortnightly accounts opened. References given and required when necessary. A Stock and Share List forwarded free on application.
BANKERS—The NATIONAL PROVINCIAL BANK OF ENGLAND, E.C.

MR. THOMAS THOMPSON, JUN., STOCK AND SHARE DEALER, AND MINING AGENT AND ACCOUNTANT,
1, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS, 85, GRACECHURCH STREET, LONDON, E.C.

MR. GEORGE BUDGE, STOCK AND SHARE DEALER,
4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 26 years), has SPECIAL BUSINESS in—Monydd Gorddu, Minera, Glenroy, Tankerville, Grogwinion, Denbighshire, Derwent, Tolima, Llanrwst, Chapel House, Combmartin, Wye Valley, Cakemore Colliery, Bodidris, Hornachos, Talybont, Exchequer, East Van, South Cwmystwith, Aberdaunant, East Chiverton, Chicago, Pennant, Yorke Peninsula, D'Eresby, Holmbush, Cathedral, Trebeigh Consols, Melancar, Richmond, Penstruthal, Condes of Chili, Cesena Sulphur, St. John del Rey, Santa Barbara, Marke Valley, Cambrian, North Cornwall, Argentine, Blue Tent, Belstone, Prince of Wales, Clementina, Wheal Newton.

MESSRS. PETER WATSON AND CO.,
54, OLD BROAD STREET, LONDON, E.C.
BUSINESS in STOCKS and SHARES.
RAILWAYS, BANKS, DIVIDEND LEAD MINES, &c.
BANKERS: THE ALLIANCE BANK (Limited).
A CIRCULAR published MONTHLY. Single Copy, 6d.; Annually, 5s.

MR. ALFRED E. COOKE,
STOCK AND SHARE DEALER,
76, OLD BROAD STREET, LONDON, E.C.
ESTABLISHED 1853.
Business transacted at NET PRICES in CONSOLS, ENGLISH RAILWAYS, BANKS, FOREIGN STOCKS, TELEGRAPHS, and every description of MISCELLANEOUS SHARES.

SPECULATIVE ACCOUNTS opened on receipt of cover in RAILWAYS and FOREIGN STOCKS.

WORTHLESS MINE SHARES.—Experienced advice should be sought. For List of
BONA FIDE PROGRESSIVE MINES,
Apply to—
MR. ALFRED E. COOKE, 76, OLD BROAD STREET, LONDON.

SPECIAL NOTICE.—MR. COOKE does not OFFER SHARES at FIXED PRICES, as shares so offered are seldom supplied when applied for, but he deals at CLOSE PRICES in all Market Mines.

JUNE "SPECIAL INVESTMENT CIRCULAR."—Will be ready on Tuesday morning, containing best advice for investment. Post free on application to—
ALFRED E. COOKE,
76, OLD BROAD STREET, LONDON, E.C.
(Established 1853.)

MR. JAMES STOCKER, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.
[Established 1848.]
BUSINESS transacted in all kinds of STOCK EXCHANGE SECURITIES, also in every description of BRITISH and FOREIGN MINING, COLLIERY, MANUFACTURING, and other SHARES.
SPECIAL BUSINESS in the following:—

Aberdaunant, 13s. 6d.	Glyn, 29s.	Rookhope, 18s. 6d.
Bodidris.	Holmbush, 32s. 6d	Roman Grav., £11.
Combellack,	Leadhills, £5¾.	St. Harmon.
Combmartin, 8s.	Llanrwst.	St. Patrick.
Clementina, £40.	Monydd Gorddu.	Tankerville, £7.
Derwent, £2¾.	North Laxey, 16s.	Van Consols, 36s. 9d.
Devon Consols, £5¼.	Pateley Bridge, £2 2s.	West Tankerville, 20s.
East Van, £5.	Pennerley, 7s. 6d.	W. Tanker. (pref), 36s.
Grogwinion, £3½.	Penstruthal, 9s. 9d.	West Chiverton, £14¼.
Great Laxey, £20¼.	Pandora.	W. Wye Valley, £3½.
Glenroy, 19s. 6d.	Parys Mountain, 8s.	Wheal Grenville, 28s.
Almada, 5s. 6d.	Exchequer, 10s. 6d.	New Quebrada, 43s. 9d.
Argentine, £4½.	Flagstaff, £2½.	Pestarena, 4s.
Cedar Creek, 10s. 6d.	Frontino, £2½.	Port Phillip, 10s.
Chicago, £3½.	I. X. L., 13s. 6d.	Richmond, £6¾.
Chontales.	Javali, 6s. 9d.	Santa Barbara.
Don Pedro, 8s.	Last Chance, 10s.	South Aurora, 4s. 9d.
Eberhardt, £7 6s. 3d.	N. Zealand Kap., 33s.	Tecoma, 7s. 6d.

JAMES STOCKER, SWORN BROKER.
Consols, Foreign Bonds, Railways, Bank, Telegraph, Gas, and all miscellaneous Shares bought and sold, and fortnightly accounts opened for same. Shares sold for forward delivery on receipt of cover. List of prices and every information forwarded on application. References given and required when necessary.
BANKERS: LONDON AND WESTMINSTER.

JOSEPH JOHN PYNE,
MINING BROKER
AND
STOCK AND SHARE DEALER,
6, BISHOPSGATE STREET LONDON, E.C.

Mr. PYNE having been connected with MINING ENTERPRISE for upwards of FOURTEEN YEARS, and having been a DIRECTOR of MINES in SHROPSHIRE, MONTGOMERYSHIRE, CARDIGANSHIRE, CARNARVONSHIRE, YORKSHIRE, and in VENEZUELA, has had great opportunities of becoming acquainted with this particular branch of industry, and will always be desirous of giving every information in his power to all Investors transacting business with him.
ALL DESCRIPTIONS OF SHARES are dealt in, including BRITISH and FOREIGN STOCKS, and RAILWAY SECURITIES.
BANKERS—THE ALLIANCE BANK (LIMITED).

MR. T. E. W. THOMAS, SHARE BROKER,
3, GREAT WINCHESTER STREET BUILDINGS, E.C.
Established 1857.
The following are the latest prices at which business could be done. Where the difference between the buying and selling price is wide transactions may be effected at an intermediate price:—

	Buyers.	Sellers.		Buyers.	Sellers.
Argentine	£ 4¼	£ 4½	Marke Valley	£ ⅞	£ 1⅛
Assheton	1½	2	North Laxey	14s.	16s.
Bodidris	1	1¼	New Quebrada	2	2¼
Derwent	2⅛	2¼	New Zealand Kapanga.	1⅛	1¾
Devon Great Consols	5	5¼	Parys Mountain	8s.	9s.
Dolcoath	32	34	Pateley Bridge	1¾	2
Don Pedro	7s.	8s.	Pennerley	7s. 6d.	10s.
Eberhardt	7⅛	7⅛	Penstruthal	9s.	11s.
East Caradon	¾	1	Richmond	6⅝	6⅞
East Van	4½	5	Roman Gravels	11	12
Exchequer Gold	⅜	½	Rookhope	17s.	18s.
Flagstaff	2⅛	2¼	San Pedro	10s.	12s. 6d.
Frontino	2⅛	2⅜	South Condurrow	8¼	8½
Glenroy	¾	1	Tankerville	6⅛	7
Glyn	1¼	1½	Tincroft	16	17
Gorsedd and Merilyn	5	6	Van	33	34
Great Laxey	20	21	Van Consols	1¾	1⅞
Javali	6s.	8s.	West Assheton	⅞	⅞
Last Chance	5s.	10s.	West Chiverton	13	15
Ladywell	17s. 6d.	22s. 6d.	West Tankerville	¾	1
Leadhills	5¾	6	Wh. Grenville	1¼	1⅜

N.B.—The latest important discovery in Lead Mining is that of the GORSEDD AND MERLLYN MINES, in North Wales. Shares in these mines (limited, and fully paid), can be had on application, at £5 10s. per share.

MESSRS. GREGORY, WHITAKER, AND CO.,
STOCK AND SHARE DEALERS,
81, BISHOPSGATE STREET WITHIN, LONDON,
Beg to notify to their clients and investors generally that Shares offered in the LLANRWST LEAD MINE at low prices, through the medium of this Journal, are rarely, if ever, delivered to the Buyer. To ensure the delivery of Shares bought, purchasers are cautioned to pay cash only on the delivery of transfers, accompanied by the holders' certificates.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER
29, BISHOPSGATE STREET, LONDON, E.C. (Established 20 Years), can sell the following SHARES, at prices annexed:—

10 Altami, £5.	50 Gold Run, 9s. 3d.	60 Parys Mount., 8s. 3d.
5 Argentine.	60 Great West Van, 6s 6d	5 Roman Grav., £11 3 9
40 Bodidris, £1 2s. 6d.	15 Great Dyliffe, £3 11 3	ex div.
50 Birdseye Ck., 15s. 3d.	20 Glenroy, 21s.	25 Rookhope, 19s.
30 Colorado Ter., £2.	50 I. X. L., 15s.	5 Richmond, £6¾.
25 Chicago, £3½.	20 Leadhills, £5 18s. 6d.	50 St. Harmon, £2⅞.
20 Derwent, £3.	25 Marke Valley, £1¼.	25 South Darren, £2¾.
60 Exchequer, 11s.	100 Malabar, 5s. 3d.	25 S. Cwmystwith, £3¾.
20 East Caradon, 15s. 3d.	20 Nth. Laxey, 15s. 6d.	10 Tankerville, £7.
30 Frontino, £2½.	15 Pennant, £5½.	25 Van Consols, £1 16s 3d
25 Flagstaff, £2½.	75 Port Phillip, 10s.	20 W. Tankerville, 20s.
25 Gorsedd & Mer., £5.	25 Pennerley, 7s. 9d.	5 W. Craven Moor, 11½
30 Glyn, £1 11s. 3d.	50 Prince of Wales, 3s 9d	5 West Chiverton, £14.
	50 Penstruthal, 9s. 6d.	

For SPECIAL SALE—70 Almada, 5s. 3d.; 25 Condes of Chili, £3 6s. 3d.; 50 Chontales, 7s. 6d.; 10 Frontino, £6¾; 5 East Van, £4 18s. 6d.; 25 New Zealand Kapanga, 34s. 9d.; 50 South Aurora, 4s. 6d.; 5 Cargoll, £4½; 50 Pestarena, 4s.
Shares Bought and Sold at net prices. Telegrams promptly attended to.

MR. CHARLES THOMAS,
MINING AGENT, STOCK AND SHARE DEALER,
3, GREAT ST. HELEN'S, LONDON, E.C.

MESSRS. A. W. THOMAS AND CO.,
10, COLEMAN STREET, E.C.
MINING AGENTS AND STOCK AND SHARE DEALERS.
BUYERS of Minera and Lisburne.
"INVESTMENTS AND SPECULATIONS FOR 1877."
Price Sixpence.
NORTH LAXEY.—WANTED TO PURCHASE, 500 or any less number.
GORSEDD AND MERLLYN CONSOLS MINING COMPANY (LIMITED).
The discovery of lead in the property of this company not only continues, but improves as depth is attained; the value of the lode in the bottom level is £80 per fathom. We have published a circular letter (a copy of which may be had on application) showing the result of the past three months working.
A. W. THOMAS AND CO.

FERDINAND R. KIRK, STOCKBROKER,
5, BIRCHIN LANE, E.C., has BUSINESS in—

50 Aberdaunant, 13s.	20 General Credit, £5⅝.	50 Penstruthal, 10s.
25 Bilson & Crump, £5.	10 Milner Safe, £9¾.	20 Price's Candle, £11¾.
40 Credit Foncier, £1½.	20 National Dis., £10.	10 Roy. Aquarium, £3¾.
20 Diamond Rock, £3¾.	30 Pawson, £6¾.	5 Brighton ditto, £12¾.
50 Glenroy, 17s. 6d.	50 Parys Mountain, 8s.	10 Tankerville, £7¼.

OFFERS WANTED for 60 Cardiff, 30 Newport, 20 Llanrwst.
Bankers: London and Westminster and City Bank.

MR. EDWARD ASHMEAD, 62, CORNHILL, LONDON
LONDON MINE AGENT, ACCOUNTANT, AND AUDITOR.
Constantly connected with Mining since 1856. Information given on Mining Properties as an Investment. Purchases and Sales of Mining Shares effected. Statistical Table of the Dividend Mines of 1876, and of the Highest and Lowest prices of Mining Shares. Post free, price Sixpence.

ESTABLISHED TEN YEARS.
MR. E. J. BARTLETT, STOCK AND SHARE DEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C., has SPECIAL BUSINESS in St. Patrick, Wheal Whisper, Pennerley, South Tolcarne, East Lovell, East Van, Pennant, East Caradon, West Craven Moor, Lead Hills, Minera, Parys Mountain, West Godolphin, and Wheal Grenville shares.

MESSRS. W. J. TALLENTIRE AND CO.,
STOCK BROKERS, AND DEALERS IN BANK, TRAMWAY, MINING, AND MISCELLANEOUS SHARES,
20, CHANGE ALLEY, CORNHILL, LONDON, E.C.,
Transact business in Stock Exchange Securities and Mining Shares of every description, either for immediate cash or the usual bi-monthly settlements, and also afford advice personally or by letter to executors, trustees, capitalists, and investors of every class in the selection of Securities for safe and profitable investment, their experience of the markets, extending over a period of more than 17 years, together with special facilities for acquiring information, enabling them to act beneficially for clients.
They have established Corresponding Agencies in all the principal towns of the United Kingdom, and are prepared to deal in the various local Stocks and Shares at close prices. Orders per post or telegraph receive prompt attention.
INVESTORS SHOULD APPLY for a copy of Messrs. W. J. TALLENTIRE and Co.'s Circular, SENT POST FREE. It contains valuable information on Foreign Stock, Railway, Mining, and General Investments.

TO INTENDING INVESTORS AND SHAREHOLDERS.
MESSRS. W. J. TALLENTIRE AND CO., 20, CHANGE ALLEY, CORNHILL, LONDON, E.C., have the following MINING SHARES FOR SALE.
OFFERS CAN BE MADE, OR PRICES WILL BE FORWARDED:—

35	ABERDAUNANT	LEAD.	50	PATELEY BRIDGE	LEAD.
200	BODIDRIS	do	350	PERKIN'S BEACH	do
50	EAST CRAVEN MOOR	do	100	PENNERLEY	do
35	EAST VAN	do	50	PANDORA	do
500	ELGAR	do	100	ROOKHOPE	do
200	GLENROY	do	25	ROMAN GRAVELS	do
30	GLYN	do	50	RED ROCK	do
50	GREAT DYLIFFE	do	50	SOUTH CONDURROW	TIN.
10	GREAT LAXEY	do	10	TALYBONT	LEAD.
35	GROGWINION	do	5	VAN	do
50	LEADHILLS	do	50	WEST TANKERVILLE	do
100	LLANRWST	do	20	WYE VALLEY	do
35	MARKE VALLEY	COPPER.	30	WEST WYE VALLEY	do
200	MEDLYN MOOR	TIN.	5	WEST GOGINAN	do
200	NORTH LAXEY	LEAD.	20	WHEAL GRENVILLE	do
100	PARYS MOUNTAIN	COPPER.	8	WEST CRAVEN MOOR	do
200	PENSTRUTHAL	TIN.	20	WEST CHIVERTON	do

N.B.—Some of the above will be sold on specially favourable terms to cash purchasers.

JOHN RISLEY (SWORN), STOCK AND SHARE BROKER,
38, CORNHILL, LONDON, E.C.
Established 18 Years.
References required or part payment in cash with orders. Business transacted at the following rates of commission:—Railway Stocks, ¼ per cent.; Foreign Stocks, ½ per cent.; Shares of £4 each and upwards, 1¼ per cent., and at £4 each and under, 1s. per share.
J. R. may be confidentially consulted upon various and special investments.

WILLIAM B. COBB STOCK AND SHARE DEALER,
62, CORNHILL, LONDON, E.C.
Business transacted in every description of British and Foreign Stocks, Mining Shares, &c. Fortnightly accounts opened upon receipt of usual cover.
SPECIAL BUSINESS in the following Shares;—

Aberdaunant.	Clementina.	Don Pedro.
Frontino.	Llanrwst.	Malabar.
Port Phillip.	South Cwmystwith.	Tolima.

COURT GRANGE MINE.—The reserves of ore laid open in this mine are valued at £24,000. The property before long will prove one of the best dividend-paying mines in Cardiganshire. The shares should be bought at once before they rise still further. I have buyers at £1 ⅛—sellers at £1⅛.
Bankers: The Alliance Bank (Limited).

INVESTMENTS.—THE BEST for LARGE or SMALL SUMS. Profits last account vary from 35 to 100 per cent. on outlay. Like results may be relied on for June account by acting in one or two active stocks. Apply for list and particulars. Enclose stamp.
HUME AND CO., CROSBY HALL CHAMBERS, LONDON, E.C.

MESSRS. JOSEPH J. REYNOLDS AND CO.,
STOCK AND SHARE DEALERS, 26, FINSBURY PLACE,
Have SPECIAL BUSINESS in—

Great Laxey.	Combmartin.	Llanrwst.
Bodidris.	Denbighshire Consolid.	Pennant.
		Gorsedd and Merllyn.

MESSRS. ENDEAN, FISHER, AND CO.,
STOCK AND SHARE DEALERS,
3, LOMBARD COURT, LOMBARD STREET, LONDON, E.C.
Bankers: London and Westminster, Lothbury,
From a thorough knowledge of their business, based upon many years' experience, are PREPARED to ADVISE on every description of SECURITY for INVESTMENT or SPECULATION.
Their sources of information, Home and Foreign, being various and extensive, E., F., and Co.'s clients and the general public may place the most implicit confidence in such advice as they deem it their duty to give. Statements emanating from their firm will be founded only on well-authenticated facts, and may, therefore, be relied upon.
Orders or Telegrams for the Sale or Purchase, for cash or account, promptly executed on receipt.

LOCOMOTIVE TANK ENGINES, fitted with COPPER FIRE-BOX, BRASS TUBES, STEEL TYRES, and in finish equal to the MAIN LINE LOCOMOTIVES, FOR SALE, on Cash or Deferred Payments.—Apply to—
FOX, WALKER, AND CO, ATLAS WORKS, BRISTOL.

STOCK.—HAYWARD TYLER AND CO., of LONDON, have now ready ENGINES, BOILERS, and "UNIVERSAL" STEAM PUMPS having made extensive alterations in their premises to enable them to keep stock.

The Cambrian Mining Company

(LIMITED).

CAPITAL £100,000, IN 50,000 SHARES OF £2 EACH.

DIRECTORS.

Colonel the Hon. T. G. CHOLMONDELEY, J.P., Abbots Moss, Northwich.
EDWARD HILTON, Esq., Radfield, Clapham Park, S.W.
JAMES GRIEVES, Esq., The Paragon, Streatham.
GEORGE H. KEENE, Esq., Warwick Street, S.W.—MANAGING DIRECTOR.

SOLICITOR.

HENRY WICKENS, Esq., 96, Palmerston Buildings, London, E.C.

BANKERS.

ROBARTS, LUBBOCK, AND CO., Lombard-street, London, E.C.

LONDON OFFICES.

48 AND 49, PALMERSTON BUILDINGS, OLD BROAD STREET, E.C.

This Company is formed to Purchase for the sum of £70,000, in Shares, the Lease, Plant, Machinery, Buildings, and other Appliances and Appurtenances of the

ESGAIR-HIR SILVER-LEAD MINE.

AND THE

ESGAIR-FFRAITH COPPER MINE.

These famous mines are amongst the most extensive and richest ever discovered in Wales.
The mines are now in operation.
The properties extend on the course of the lodes upwards of three miles.
The mines are amply provided with modern and powerful pumping, drawing, crushing, and dressing machinery.
Barracks are erected on the mines for the accommodation of upwards of 300 miners.
The other buildings comprise well-fitted offices, smiths' and carpenters' shops, ore-houses, stables, engine-houses, &c., &c.
The royalty is only 1-16th, and no rent.
The chief management of the mines is under the direction of Mr. Thomas Granville, M.E., late Manager of North Basset, West Basset, East Carn Brea, and other most successful mines.
The great value of these mines and the desirability of an investment in the shares of the company is shown by the following reports of practical mining engineers:—

REPORT OF MR. JOSIAH H. HITCHINS.

This gentleman is one of the highest mining authorities, and the discoverer of the celebrated Devon Great Consols Mines, which have paid in dividends £1,192,096.

ESGAIR-FFRAITH.—The property comprising this mine is an unusually extensive one, being quite 1200 fms. on the course of the lode. The workings consist of an adit brought in from the side of the mountain, a level 10 fms. below, and an engine-shaft, which is 6 ft. deeper. The extent of the adit level east is 63 fms., in which the lode (to be seen throughout the drivage) is 20 ft. wide, and as the north or hanging-wall of the lode has not been seen its entire width is unknown. It may be said without fear of contradiction that this great lode presents the most conclusive evidence of powerful mineral and chemical action, there being, indeed, convincing proof thereof in the fact that the back of the level (only 15 fathoms deep) has been stoped (worked) for ore in places—that is to say, at five different points, the produce being copper ore of the value of £20 a ton. Although this lode so far in Esgair-Ffraith has proved no other than a copper-producing one, which it will be for the most part for a good many fathoms below the present workings (yielding such large quantities of rich ore as will ensure high percentage profits). I am of the opinion that in depth it will be a most abundantly productive lead lode; Esgair-Ffraith being certain as a lead mine, in my opinion, to equal the adjoining celebrated Esgair-Hir, one of the greatest and richest of the lead mines in Wales, and on the very same lode as Esgair-Ffraith, it is important to bear in mind.

The opinion just offered finds support in the fact that in the eastern portion of Esgair-Hir the lode in places was a copper-producing one.

The extent of the 10 fm. level east is 17 fms., the lode being equally wide, and showing as highly promising a character as in the adit. The drivage is being pushed forward with all possible force for getting far enough east to have the rich ore ground gone through in the adit, which no doubt will at this level, which is 10 fms. deeper, be found equally rich, if not richer, and more regularly continuous. The level has not to be driven many fathoms further east before being in the run of the rich ore ground referred to; that this lode will not only be abundantly productive at the 10 fm. level, but more so at deeper levels, I feel fully assured, judging a good deal by the gossan holding down in it, which is very strong, presenting altogether a highly approvable and indeed most splendid character. I have no hesitation in saying that there exists a great body of rich copper ore in this part of Esgair-Ffraith, and at no much greater depth than the present workings, the superstructural portion thereof having indeed already been reached, it may be said without fear of being wrong.

With my 40 years' varied mining experience, I have no fear of being thought too pretentious in claiming to be competent to pronounce judgment on such a lode as the one in question. My knowledge of the constituent character of Cardiganshire productive lodes, and their mineralising conditions, as well as of the class of rocks they should be associated with, on which their ore products and accumulations in large bodies depend, will not allow me to form any other opinion of the Esgair-Ffraith lode than it is inherently one of very great productive power, having in store at no great depth, as before intimated, such resources as will ensure very large returns of ore, both copper and lead, and the realisation of large profits.

I rest my opinion on the strong ground of analogy, to which experienced and enlightened mining authorities will ever attach the utmost importance, having found it to be their most reliable guide in judging of lodes—that is to say, whether they will prove productive or not. The extent of the 10 level west is 13 fms., in which the lode is quite as wide as in the eastern drivage, and of the same highly favourable character, showing, indeed, greater mineral strength near the shaft, where it makes some good ore, so much as to be equal to about 3 tons to the fathom, which must remain for a time, it being neither convenient nor safe to take away whilst the shaft is sinking, which to continue with all possible force and dispatch is of paramount importance, it being at present only 8 ft. deeper than the 10 fm. level below the adit. The quicker the shaft is sunk the sooner will be reached the great body of rich ore that I am so certain there is below, the evidently improving character of the lode, as to be seen at the deepest point sunk, allowing of no misgiving in looking forward to the solution of this great problem.

Whilst underground I had some stones of ore broken from the lode at the very bottom of the shaft, some of them being very rich, from 15 to 20 per cent., and presenting altogether a highly promising general character—indeed, unmistakable evidence of this lode being one of very great mineral power. It is very satisfactory that this mine has at command excellent machinery, consisting of a powerful water-wheel, 42 ft. diameter and 4 ft. breast; crusher wheel, 40 ft. diameter and 4 ft. breast; good wheel (quite powerful enough) for driving dressing machinery, consisting of four double patent jiggers, &c., all in complete working condition; wheel for drawing, 18 feet diameter and 2 ft. 6 in. breast, with drum and all requisite attachments complete, and in perfect working order. Besides the water of this mine being enough to drive all the machinery that the various purposes referred to will necessitate, it is quite equal to working such pumping machinery as will command the fully effectual development of the lode to a depth of more than 100 fms., which is, indeed, of great importance, ensuring the cheapest and most profitable prosecution possible of the mine. It is also of importance that so much has been done in opening out this great lode, thereby several years' working being saved, and an outlay of some thousands of pounds.

With respect to the driving of the present bottom level east, to open out the rich ore ground 10 fms. below the adit, and the sinking of the engine-shaft for the deeper development of the lode, I have simply to observe that such operations are very desirable; in addition to which the driving of the bottom level west towards Copper shaft, and its deeper sinking, are very recommendable, as the general character of the stuff in the surface burrow cannot but be considered by any mining man of experienced judgment to indicate with much certainty (more particularly the splendid gossan) that there are very large bodies of rich ore to be laid open in this part of Esgair-Ffraith, there being plenty of spare engine-power for deeper operations, pumping and drawing purposes. The important question whether the Esgair-Ffraith lode is in the right rock finds the best answer in the fact that it is in precisely the same slate formation as Esgair-Hir and many mines that have figured amongst the greatest and richest mines of Wales. On sinking the present engine-shaft—say 30 fms. more, or only 20—it will, in my opinion, reach the great body of rich ore that I again say I firmly believe there is in Esgair-Ffraith; such a body of ore, indeed, as will ensure very large profits, and establish a great value for the mine. The Devon Great Consols ore formation, that increased the value of the £1 shares to £600, was met with at a less depth than 20 fathoms. I now more confidently rely on my judgment than I did when introducing those mines, as justified by 30 years' additional experience, although I said from the first that their results would be so great as would surprise the mining world; the close upon £1,200,000 dividends that they have paid being a brilliant realisation of that prediction. I again most emphatically say that I firmly believe Esgair-Ffraith will also result in an exceedingly rich mine.

May 14, 1877. J. H. HITCHINS.

REPORTS OF MR. ABSALOM FRANCIS,

Who possesses a most intimate knowledge of Welsh Mines, and is the author of the "History of the Cardiganshire Mines."

ESGAIR-HIR MINE.—This property is situate about seven miles eastward from the Llanfihangel Railway Station. It contains for very nearly one mile in length one of the largest and most masterly, as well I may safely say, the richest lode ever worked in Cardiganshire, it having produced from the 20 fm. level under adit considerably more than a million sterling in value of silver-lead ore. The courses of ore throughout the vein make in solid ribs varying from 3 in. to 6 ft. wide, the lode being in places over 100 ft. in width. I have no hesitation in saying that when the lode has been properly cross-cut throughout the grant, even at the present depths, that as much ore will remain for taking away again as has been taken away. All that is wanted to make this the greatest, richest, and most durable of the mines in this county is to work the property systematically—this being the case failure is impossible, and success is a certainty. It will be necessary to describe the position of the mine, which stands on very high ground—I should say from 1000 to 1200 ft. above the sea-level—and on this high ground is the machinery.

The lodes passing through the grant go through ground that rises rapidly from the western boundary towards the different points of workings eastward, so that by starting an adit level at this point (the boundary west), where a cross-cut of about 20 fms. would cut the lode, the adit could be continued all the way to the extreme end of the workings on the course of the lode, and would gain a back of from 500 ft. to 600 ft. in driving a distance of about 400 fms., and this would unwater the deepest point in the old workings, and leave a back of more than 30 fms. of whole ground to be taken away over the adit level, calculating from the deepest point of working.

Pen-y-Bwlch shaft has reached a depth of 60 fms., and Shaft Goch has also been sunk to a depth of 30 fms. below adit, the latter being 180 fms. to the west of the former; and the late managers say—"It only now remains to cross-cut and drive on the lodes to prove their value, which, according to our opinion, a small sum will accomplish." I may say that there does not exist one single doubt on my mind that a mine of great importance, and immensely profitable, must be opened out between these two points, and this should be done whilst the adit is being driven towards it; and as this work progresses there can be but little doubt very valuable discoveries will be made in different places, and where rich ore is found ventilating shafts should be put through to surface, both for this and for the economical working of the ground.

There is a moral certainty of opening out a mine that will last a century, and become the richest and most profitable ever developed in Cardiganshire. There are also excellent offices, smiths' and carpenters' shops, miners' barracks, and other necessary buildings erected at great cost.

In connection with the horizontal steam-engine, I may say that all the necessary pitwork is fixed and in working order to the bottom of Pen-y-Bwich shaft and shaft Goch. Tramroads laid throughout the mine, and, in fact, everything that is required to prosecute the working of the mine. There is also an excellent crushing mill and a good dressing flooring supplied with jigging hutches, &c.

ESGAIR-FFRAITH MINE.—This mine lies to the east of Esgair-Hir, and distant from the Llanfihangel Railway Station about 8 miles. The vein is of great size, varying from 30 to 60 ft. wide, and in this grant, and immediately to the west of it, has produced millions of pounds worth of silver-lead and copper ores. The mine is well supplied with powerful water-wheels, for the purposes of pumping, crushing, drawing, and dressing; for the latter purposes the machinery is most perfect and complete, consisting of patent jiggers, &c., of the most approved construction, and all of which could not have been erected for a less sum than £5000.

The ground from the westward, towards Esgair-Ffraith, falls rapidly for nearly three-fourths of a mile, so that the machinery is fixed in a well sheltered spot, and is supplied with water at all seasons of the year.

Although immense quantities of ore have been returned from the mine, the deepest of the workings have only reached a point of 10 fms. under the adit level, the component parts of the lode being a very rich gossan, with carbonate of lime, and a very rich copper ore, peacock, and yellow or copper pyrites, and which have been sold for as much as £25 10s. per ton. That this great gossan rides or covers an immense mass or body of lead ore I have no doubt whatever, but there is little doubt on my mind that before the copper gives way to lead ore tens of thousands of tons of the former will be raised, and that the copper will gradually subside and be taken place by the lead, as is the case in the deepest mines of Cornwall—they making copper near the surface, which gives way to tin ore in depth. As there is a splendid field of machinery on the mine already for its immediate development, with rich copper ground to start the sinking of the present engine-shaft on, and to lay open ground enough to bring the mine into a state of good returns and profits, I would, therefore, advise the carrying out of the following work:—

To sink the engine-shaft from the 10 to the 20 fm. level, leaving a clear back of 10 fms.—say 11 fms.—at £30 per fathom, including costs and materials of all kinds, or						£ 330
Drive the 10 fm. level west 50 fms., at £10						500
„ 10 „	east 50	„	8			400
„ 20 „	west 30	„	10			300
„ 20 „	east 30	„	8			240
Sink a winze under the 10 west to 20, 11 fms., at £12						132
„ „	east „	11	„	12		132
Sink shaft from 20 to 30, 11 fms., at £30						330
Total						£2364

I believe this work would lay open a sufficient quantity of ore to commence returns of £1000 per month, and which, I believe, would go on increasing from year to year. It is impossible to select a finer property for investment.

REPORT BY CAPT. JOHN HUGHES.

ESGAIR-HIR SILVER-LEAD MINE.

I was captain of this mine for two years, during which time we worked at a profit of upwards £1000 per month. The lode is one of the strongest and finest ever discovered. It runs east and west, and underlies north. The enormous size of the lode may be imagined when I state that in some places it opens out to a width of 30 yards. I have from this lode cut steel-grained silver-lead 4 feet wide solid.

I have seen most of the mines in Cardiganshire, but nothing equal to Esgair-Hir.

I have a very high opinion of the bog in front of the mine barracks, and I am aware that the ore dips towards that swampy spot. I would advise the sinking of Shaft Goch 10 fms., and then drive a level east and west; also make a communication between this shaft and the Blue shaft. If this is done it will open exceedingly rich courses of ore. From the adit level down to the 30 fm. level I have not the least doubt but that there are some thousands of tons of silver-lead standing in the sides. I feel sure that a new adit level from the western boundary to the Blue shaft would open the mine richer than ever, and would also make it a lasting success.

April 23, 1877. JOHN HUGHES.

REPORT BY CAPT. HENRY BOUNDY

ESGAIR-FFRAITH COPPER MINE

I have known this mine for the last 20 years, and had the sole underground management for five years. I shall in this report confine myself to the eastern part, for two reasons—I believe it to be the most important part of the extensive sett, and it is the part that is now being operated upon. The eastern shaft is sunk from surface a distance of 25 fms. At 15 fms. from surface an adit level is extended east 62 fms., in the driving of which we met with five immensely rich courses of copper ore. The richness of these courses of ore may be understood from the fact of our extracting it in masses of upwards of 1 ton at a time. The average value of this ore was £20 per ton.

From the adit the shaft is sunk a further distance of 10 fms., or 25 fms. from surface, and a level east was commenced, but not driven sufficiently far to cut into the courses of ore met with in the adit above. The present operations will achieve this object, and will, I do not hesitate to say, result in enormous profits. I consider you are acting wisely in sinking the shaft deeper, and then to drive east and west. There cannot be the least doubt that the deeper this lode is opened up the richer the copper will be found. I have never seen such a strong copper lode, or one so beautifully composed—in fact, the lode is so great that when explored to a greater depth it is impossible to place a limit to its value. HENRY BOUNDY.

April 23, 1877.

The dates and names of the parties to the contracts entered into, as required by the Joint-Stock Companies Acts to be specified, are an Indenture of Assignment bearing date the 19th day of March, 1877, made between Griffiths Williams and Evan Jones Williams of the one part, and Thomas Hine Green of the other part; and a contract bearing date the 16th day of May, 1877, between the said Thomas Hine Green of the one part, and the said Cambrian Mining Company (Limited) of the other part, and an Indenture of Assignment bearing date the 18th day of May, 1877, between the said Thomas Hine Green of the one part, and the said company of the other part.

FORM OF APPLICATION.

To the Directors of the
CAMBRIAN MINING COMPANY (LIMITED).

GENTLEMEN,—Please allot me shares of the CAMBRIAN MINING COMPANY (Limited), at £2 per share, fully paid, for which I enclose cheque value £ .

Name in full ... ...
Address ... ...
Date ... ... Occupation, if any ... ...

This form, when filled up, to be forwarded to Mr. G. H. KEENE, Managing Director, 48 and 49, Palmerston Buildings, London, E.C.

Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES—No. XXVII.*

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,
Certificated Mining Engineer.
(Formerly Student at the Royal Bergakademie, Clausthal).

[The Author reserves the right of reproduction.]

SECTION II.

PROSPECTING FOR MINERALS—BORING.

III.—THE BORING OPERATION.

REMOVAL OF HINDRANCES WHICH OCCUR OR ORIGINATE DURING THE BORING.

The water-tight tubes are generally made of wood, since a narrowing of the bore hole is of less consequence than durability in the lining. The wood usually chosen is fir or pine, since it is cheaper than oak or beech, and answers the purpose equally well. The tubes are made by boring out long stems, or by cutting them in two along their length, and then preparing each half separately, which are fastened together by means of wooden pins, or dowels. When the diameter is considerable they are made of staves, which are held together by copper or brass hoops, which latter are fastened by bass counter-sunk headed screws. The ends of the tubes are laid flush on one another, and fastened together by means of a broad copper or brass hoop. Mr. Dégoussée had the tubes weakened to half their thickness, and then laid over one another for a length of about 1 in. and the out-side joints covered with an iron ring 3½ in. broad and about ¼ in. thick sunk into the wood. In the borings for rock salt at Liebenhalle, in Germany, fir was used, each separate tube being made from the two scooped out halves of a tree trunk. The exterior diameter was 7 in., and the thickness of the wood 1 in., the two separate halves connected by 10 dowels. Each half of the tube was held together by means of a sheet copper ring, 1½ in. broad, about 2 millemetres thick. Two tubes were joined flush together, and united by means of a sheet-copper hoop, 8 in. broad—that is, covering each tube for 4 in. of its length, sunk flat in the wood, and fastened with four rows of brass screws. The lowest tube was provided with an iron shoe, and the bore hole was bored 1 ½ in. wider than the exterior diameter of the lining tubes. In the boring tools at Elmen, previously mentioned, the water-tight lining tubes were each made of seven oak stays, 6 in. broad and 2½ in. thick, and were all made to one pattern, so that when completed the inner diameter was 9½ in and the outer diameter 12 in., so that the thickness of the wood when finished was 1½ in. The staves were fastened together by dowels, 1½ in. long by 5-16th in. diameter, placed at about 3ft. apart. To hold the staves together while being turned in a lathe temporary iron hoops were bound round. The tubes were attached to each other by sheet-copper hoops, 8 in. broad, and fastened with 28 brass screws, and every 3 ft. copper hoops, 3 in. broad, were fastened round the ends, overlapping 2½ in., and being fastened together with brass screws.

The double tubes used at Artern were 3 ft. long and 1-16th in. thick of sheet-iron. The exterior tubes, which formed really a series of long muffs over the joints of the inner tubes, were 3½ in. exterior and 3½ in. interior diameter; the inner tubes were 3 in. in exterior and 2½ in. in interior diameter, so that there remained a space 1-16th in. wide between the two sets of tubes. The longitudinal lap of the tubes was 1 in., and there were 26 rivets in the length of 3 ft. The separate tubes were placed in a bath of dilute sulphuric acid (1 part of sulphuric acid of 1·85 sp. gr., and 3 parts of water) for 12 hours, and after washing with clean water scoured with sand, and then tinned. The plating bath had an addition of one-third of lead, the bath being melted under a cover of tallow. The exterior tubes were plated with tin on both sides, the inner tubes on the outside only. The tubes were fixed together vertically, and the space between two tubes was filled up by pouring in a molten alloy of 1 of tin and 2 of lead. It must be remembered that these tubes are used not only as a lining to protect and preserve the sides of the bore hole, but also to form a supply pipe, which should be water-tight, and resist corrosion, otherwise double tubes are too expensive.

The use of copper tubes for lining a bore hole is but seldom, and then only when the diameter would be too much diminished by the use of wood. In the bore hole at Elmen, of which the diameter was only 7½ in., copper tubes ¼ in. thick were used; they were soldered instead of being rivetted in a longitudinal direction with hard solder, and fastened to each other with copper rivets, the joint being afterwards made tight with a tin solder. In the bore hole at Neusalswerk the lower 600 ft. of the bore hole was lined with copper, and the upper 1500 ft. with wood. The copper tubes were each 10 ft. long, and were joined two together before being inserted in the bore hole; the exterior diameter was 7½ in., and the interior diameter 6½ in.; the junction of two tubes was made with a muff 9 in. long, the exterior diameter of the latter being 7⅞ in.; and, therefore, the thickness of the sheet copper used both for the muffs and the tubes was ⅛ in. There were four rows of rivets in the muffs, the rivets used being ¼ in. in diameter. The joints were soldered on the inside with tin.

The lowering of the tubes into the bore hole takes place in sets, each succeeding set being rivetted on to the preceding one, just above the top of the guiding bore tube, and so on till the whole have been lowered into the bore hole. It will be evident that if the tubes are to be lowered to the bottom without hindrance then the bore hole must be perfectly straight. This is usually tested by lowering a long (10 to 14 ft.) wooden cylinder, about ½ in. less in diameter than the bore hole itself; if this can be lowered to the bottom without hindrance, then the bore hole will be sufficiently straight and free from projections to proceed to the lowering of the tubes, which takes place most usually with the aid of a rope.

The lowest set of tubes, which is usually provided with a steel shoe, is, of course, lowered the first. To suspend it whilst it is being lowered the tube clamp is attached 3 or 4 ft. from its upper end. The clamp, which is made of wrought-iron, is formed in two semicircular halves, which are moveable about a hinge, by means of a screw can be joined together to form a complete circular hoop, within which the tube can be clamped fast. Each half of the hoop is provided with a projecting piece, which ends in a hook. From both sides two chains go, and are attached to the double hook, which latter, by means of an intermediate rod, is attached to the rope of the winding apparatus. By these means the tube is suspended and gradually lowered into the bore hole, until the projections come to rest on the top of the guiding bore tube. When the bore hole is very deep the weight which has to be supported becomes very considerable, and the surface on which they are supported is comparatively small. On this account Dégoussée, Kind, and others usually made use of a wooden clamp. It is suspended by means of two legs, or it may be found more advantageous during the lowering to use a tube clamp, and then when the tube has been lowered so much that it is necessary to suspend it whilst the succeeding sets are beine rivetted on, to attach the clamp support.

When the first set of tubes have been suspended by means of the tube clamp from the top of the guiding bore tube the next set is attached in a similar manner to the winding rope, and slowly lowered over the top of the first set of tubes, until the lower end of the second tube drops, and fits with the rivet holes corresponding into the top end of the first set of tubes. As the tubes are made to fit each other tightly, there is sometimes some difficulty experienced in getting the holes to correspond, so that it may be found more advantageous to insert the rivet holes in the upper end of each tube only at first, and afterwards to bore the holes in the lower ends when they have been lowered into the projecting end above the top of the guiding bore tube. In lowering the one set into the other care should be taken to preserve a perfectly vertical direction, which should be tested by means of a plummet. The second set of tubes should be held in a vertical position by means of a tube clamp wedged against the woodwork of the bore shaft, or frame, whilst the two sets are being rivetted together.

The following method is that employed by M. Dégoussée in rivetting the sets together. The first set of tubes is lowered by means of an iron tube clamp into the bore hole, but with the greatest part projecting above the top of the guiding bore tube. At a short distance above the top of the guiding bore tube a tempory scaffold is fixed round the lining tubes, and another at the surface a little below the muff. Just above the upper scaffold a woollen tube clamp is attached, which rests on the scaffold. The foreman then descends the bore shaft to the lower scaffold, and makes the tubes fast against the scaffold by means of four wedges. He then calls to one of the workmen on the upper scaffold to suspend a plummet from the lower parts of the muff. The joint allows the passage of a plummet line in one plane and the semicircular cuts in another plane. The plummet is again suspended from the muff in a plane passing through the axis of the bore hole at right angles to the first, so as to be able to fix the tube, or set of tubes, in a perfectly vertical position; and the wooden clamp on the upper scaffold is wedged and strutted perfectly tight in position. The next tube, or set of tubes, is then raised in the bore tower, and suspended or lowered into the muff; the upper end is being wedged tight (after the tube has been adjusted to a perfectly vertical position) against a temporary scaffolding, after which the rivetting of the sets together takes place. If this care is not taken there will always be a risk of connecting the tubes together in a crooked manner. The following is, perhaps, the simplest method, used by M. Dégoussée, of rivetting the single tubes together to form sets, as far as the apparatus is concerned. The rivetting apparatus consists of a long iron rod, to the end of which a solid iron bobbin is attached. The bobbin is nearly oval, in vertical section, and circular in horizontal section, except that one side is made somewhat flat. The horizontal section is of nearly the same diameter as the inside of the lining. A wedge attached to the end of a long iron bar can be passed partly down between the bobbin and the inside of the lining, by which means the bobbin can be pressed tight against the heads of the rivets on the inside of the lining. The two rods to which the bobbin and the wedge are attached must be longer than the tube. The lower end of the bobbin has a ring screwed into it, from which the rivets can be suspended by means of short strings, whilst the bobbin is being bored into the tube. The ends of the rivets terminate in a small hook, by means of which they are attached to the strings fastened to the ring beneath the bobbin. After the hook has been properly forged the rivet is indented all round, so that the end can be readily chipped off when it is necessary to proceed to hammer the rivet end up to a head. When this bobbin has been lowered into a suitable position a little above where the junction of the two tubes occurs, one of the workmen inserts a small piece of wire (the end of which is bent so as to form a small hook) through the already bored rivet holes in succession, and by means of the hook at the end of the wire manages successively to catch hold of the strings to which the rivets are attached, and so draws all the rivets through the rivet holes. The strings to which the rivets are attached are cut, and the bobbin is lowered till the widest part is at the level of the rivet holes, and the wedge is then inserted, the end of the rivets which project outside the tube are then hammered up to form proper rivet heads. The rivet holes are generally placed in two horizontal rows, forming a zigzag line round the tube.

In attaching the different sets to the remainder the rivets are made somewhat different. The rivet holes are tapped, and as a consequence the rivets are screwed; they have very narrow flat heads on the inside, and the end of the rivet is forged to form a small hook, by which they can be attached to a long piece of string, which thus allows of their being lowered inside the long lengths of tubes. As above mentioned, the rivets are drawn through the holes by one of the men inserting a piece of wire, bent to a hook at the end, through the rivet holes, and thus laying hold of the string by which the rivet is suspended. When the rivets have been drawn through the holes and screwed pretty tightly up a very narrow nut is screwed on to the end projecting outside the tube, the part of the rivet which still projects is then cut off with a chisel. The arrangement of Dégoussée's, which has nuts on the lining tube, is not to be recommended, as the projecting nut heads are liable to catch against the sides of the bore hole.

The rivetting anvil or block used by Kind consists of two semicylindrical blocks of iron about 6 in. in height, each of these is attached to a strong bar of iron, the one which is about 1 ft. longer than the other has a screw formed on the upper end, by which it is attached to the boring rods. The shorter bar is bent nearly at right angles at its upper end, where it is attached to the longer rod by means of an ordinary pin joint, so that the two semi-cylindrical blocks can be moved nearer together or farther apart. These two blocks when laid close together have nearly the same diameter as the inside of the tube. In order, however, to make the two halves fit close against the inside of the tube during rivetting a broad wedge can be inserted between them and driven in tight. The wedge is attached to a fork, the shaft of which is provided with a screw, so that it can be attached to a long iron rod, by which it is thus readily driven tight between the two rivetting blocks.

When it is intended to commence rivetting two sets together the rivetting blocks are first lowered to a little below the row of rivet holes; in order to see the position more readily a short candle is fixed on the top of the blocks with a piece of moist clay, and the rivets are then lowered. Kind formerly used a rod with a groove in it at the lower end, in which the heads of the rivets were inserted for lowering the rivets, and inserting them in the rivet holes. After the rivets have been inserted the rivetting blocks are raised so as to be opposite the rivet holes, and the wedge is driven down between the two halves; the hammering of the rivet heads is then proceeded with. Kind has more lately much simplified the process of rivetting. In the place of using rivets, provided with heads which require to be inserted in the rivet holes from the inside of the lining tubes, he makes use of short pieces of iron wire, 1½ to 1⅝ millimetre long, and 1⅔ millimetre diameter, as rivets which are inserted from the outside of the lining tube, that end of the wire which is directed towards the inside of the tube is split across in one direction (or in two at right angles to each other), so that when the rivetting blocks are inserted, and the rivets hammered up on the outside, the inner end next to the rivetting blocks spreads out somewhat, and forms a head. The rivetting being completed, the wedge is withdrawn, and it and the rivetting blocks are withdrawn from the lining, and the iron tube clamp is attached at about 4 ft. from the upper part of the second set of tubes, which are thus by means of chains suspended from the winding rope. In order to allow of the tubes being lowered the wooden tube clamp, which rests on the top of the guiding bore tube, is loosened, and the winding rope with the two sets of tubes is carefully lowered as far as the wooden tube clamp (*i.e.*, till the iron tube clamp by which the lining is suspended rests on the wooden clamp), the wooden clamp is then screwed tight, and the iron clamp loosened and withdrawn, so that the tubes are again suspended from the wooden tube clamp. The iron tube clamp is then attached to a third set of tubes, which are lowered on and rivetted to the top of the second set, and so on, fresh sets being added until the lower end of the first set of tubes is about 6 ft. below the place in the bore hole which it was necessary to line, or even to the bottom of the bore hole itself.

The depth to which the lining is sunk below any quick strata will depend whether it is intended to continue the hole of the original diameter (somewhat greater than the exterior diameter of the lining), or of a diameter equal to that of the interior of the lining. In the former case it is evident that the lining should not be lowered quite to the bottom of the bore hole, as room must be left equal to the height of the after borers, the lift or fall of the borer. In the latter case it is usual to lower the lining to the bottom of the bore hole, and then to continue boring with a smaller cutter. In both cases the lining is generally suspended during the further boring from the top of the guiding bore tube, either by bolting a ring of angle iron to the upper end of the tube, or by means of a ring having four horizontal lugs, which rest upon the top of the guiding bore tube.

When the bore hole is continued of a smaller diameter the diminution need seldom amount to more than ¼ in., and often only from deposition of the lower coal measures was followed by a continued 2 to 3 millimetres, since it is only necessary to leave sufficient to form a firm ledge for the foot of the lining. When the boring is continued with an apparatus which requires a cap, especially the earlier constructions of Kind, care should be taken to avoid having the cap in the level of the shoe of the lining, particularly when the hole is being carried down of the original diameter.

In the borings for salt, carried on in 1847 at Baranowo, in the province of Posen, the separate tubes being 1·57 millimetre diameter, Boremaster Cramer used the following arrangement for the rivetting blocks. The two blocks, which were semi-cylindrical in shape, had the flat sides which faced each other inclined inwards and upwards, so that the wooden wedge which came between them was inserted from beneath. The two blocks were of cast-iron, and supported by two rods from a ring which rested on the top of the tube. The wooden wedge was suspended from a lever, the end of which was centred on one side of the ring, so that on raising the arm of the lever (single-armed lever) the wooden wedge was raised, forcing the two blocks tight against the inside of the lining tube.

Dégoussée, who has had considerable experience in boring for artesian springs, &c., used galvanished sheet iron piping most frequently for water-tight linings. He usually had a protecting sheet lining outside the water-tight lining, which, however, was only used for protecting the bore hole during the boring, the water-tight lining being inserted afterwards. The protecting lining, however, was not left in the bore hole after its completion, but gradually withdrawn, a water-tight cement of one part of Roman cement and two parts of sand and cast-iron filings was poured between the water-tight lining and the sides of the bore hole as the provisionary protecting lining was withdrawn, and this hardening formed a water-tight cover outside the lining. The last portion of the protecting lining was generally left as a protection against the upper alluvial strata, the latter to keep out surface water.

Hindrances occuring during the lining of a bore hole.—The free space left between the outside of the lining tube and the sides of the bore hole generally amounts to ½ in. all round, that is the diameter of the lining tube is made 1 in. less than that of the bore hole; it is better, however, to leave from ⅝ in. to 1 in. all round, as there is then much less liability of anything occurring to hinder the lowering of the lining. Should the bore hole be perfectly vertical there will be little liability of the lining then catching except in consequence of the falling in from the sides of the bore hole, or from the lining having been pressed sidewards. In such a case the tube clamp is connected by chains to the end of the boring lever, and either by twisting the lining tubes round first in one direction, and then in the other or by gently raising and lowering the tubes it is sought to loosen the falling in, and if these do not succeed the attempt may be made by means of light blows with a hand hammer, or the lining may be raised above the place where the portion of the side has fallen in, so as to allow of the stones, &c., falling to the bottom of the bore hole.

If the bore hole is not vertical great difficulty will be experienced in lining it, hence it is customary to test the bore hole before inserting the lining. For this purpose a long carefully-turned cylinder of wood, of a diameter but little less than that of the bore hole, is lowered, and if it can be readily raised and lowered without any obstruction the bore hole may be assumed to be pretty vertical. The testing of the bore hole as to its perpendicularity should take place, when possible, repeatedly during the boring operations, so that when any deviation from the vertical takes place it can be at once detected and remedied. M. Dégoussée recommends and has adopted the plan of filling the bore hole up to some distance above where the bore hole commences to deviate from a vertical direction with hard compact stones or with hydraulic cement, and to commence to bore the hole out afresh from this point. In the latter case some months may be required before the cement has completely hardened.

Before free falling apparatus came into use M. Dégoussée used a long cylinder as guide, which was fixed at the lower perfectly vertical part of the bore hole; the lining of the bore hole was continued downwards as close upon the boring tool as possible, so as to prevent getting the bore hole out of the vertical again. Such a proceeding is, however, doubtful, and the advice he gives of enlarging the bore hole downwards to the point where it commences to deviate from the vertical, and then to line the bore hole, is much to be preferred.

In the case of a bore hole which has deviated from the vertical, and which is not very deep, it is always best to enlarge the bore hole from the surface as much as is necessary to remedy the amount of deviation which has taken place. When the portion of the bore hole which is not vertical is of any great length, and the bore hole has still to be carried down a considerable distance, the best advice that can be given is to leave it, and commence an entirely fresh hole.

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath, Dr. Von Groddeck, Director of the Royal Bergakademie, Clausthal, The Harz, North Germany.

THE VARIATION IN THE THICKNESS OF THE LANCASHIRE COAL MEASURES.

At the Manchester Geological Society meeting, on Tuesday (Prof. BOYD DAWKINS in the chair) the discussion was renewed on the paper read at a previous meeting by Mr. C. De Rance, F.G.S., "On the Variation in Thickness of the Coals and Measures of the Lancashire Coal Field," the substance of which has already appeared in the Journal.

The CHAIRMAN in re-opening the discussion, said that the points which Mr. De Rance brought before them for their consideration were—First, that the Lancashire and North Flintshire coal fields were originally deposited over an inclined plane of millstone grit, sloping to the southwards. Secondly, that in the times of the middle coal measures a cynclinal axis came into existence, causing a greater depression of the coal basin along a definite line, which gradually travelled to the north-east in time, until it reached Worthington, near Wigan. Thirdly, that the deposition of the coal measures was followed by continued subsidence, which caused the carboniferous series and the underlying older rocks to be rolled into a series of flexures before the denudation which preceded the Permian epoch. Fourthly, that after that era an upheaval took place, which produced lines of fault ranging north and south, which was followed by another upheaval along north north-westerly lines.

Mr. J. DICKINSON, Her Majesty's Inspector of Mines, said that when the paper was read he had called attention to the Burnley section not being accurate, and he had told Mr. De Rance where a correct section might be seen, and these he believed that gentleman had seen.

Mr. DE RANCE said he had to thank Mr. Dickinson for having given him a list of collieries. When he came to examine into the various Burnley sections he found in Burnley very much the same thing as they had in Wigan with the thickening and thinning of the seams in the district, and the Burnley column was a correlation of two sections taken from collieries two miles apart.

Mr. DICKINSON said he was glad to see the Burnley section put right; this had been a blot upon their transactions for some time, and it would have been a pity to have had it perpetuated in a new paper. In some of the sinkings the distance between the King coal and Arley Mines varied, and that was explained by the fact that some of the shafts which had been sunk had crossed faults, and in sinking a shaft through measures which lay so nearly level they could only shorten the distance by crossing a fault, they could not lengthen the distance. The Burnley coal field was only connected with the Lancashire coal field in its lower members. The Mountain mine was continuous from Barnley to Lancashire, but the Arley was not continuous. The King coal varied very much in the Burnley coal field. In some parts it formed an immense seam, whilst in others it was divided into beds, and whether it was the King coal was doubtful. So that although the general principle as regards the thinning up of the strata was borne out by the paper the connection traced out between the Burnley and Lancashire coal fields was doubtful.

Mr. G. F. SEDDON said, from his knowledge of the Burnley coal field he could quite agree with Mr. Dickinson that the correlation of the Burnley coal field with the South Lancashire coal field was the most complete only for its lower mines. The mines, as shown in the Wigan district, were what he had in some cases proved them

to be himself. Personally he felt deeply indebted to Mr. De Rance for having brought the matter before the Society.

The CHAIRMAN said it seemed to him that the general conclusions which Mr. De Rance had drawn from his sections were conclusions which, geologically, were absolutely beyond any possibility of correction. With regard, however, to one of his conclusions—that the subsidence, and that after that era an upheaval took place by which lines and faults were produced—that he thought had not been altogether proved in the paper. It was true they were produced after the deposition of the coal measures, but it was not equally clear to his mind that the faults were made after the flexures were formed. Some of the faults he thought were produced while the flexures were being produced. These flexures were formed by lateral pressure, which was produced by subsidence. There was a subsiding segment of the earth's crust, which sunk whilst the rest did not sink with it. It seemed, therefore, very likely that some of the faults affecting the coal measures might have been produced at the same time, or even before, the flexures were produced. This, however, was a subsidiary question. With reference to any of the other points he did not think there was anything that remained to be said.

A vote of thanks having been passed for the paper,

Mr. DE RANCE said that one of the chief objects he had in view in bringing the matter forward was to show what was being done in the Geological Survey in different directions in preparing sections, and that Society being composed largely of colliery managers and engineers, it seemed to him they were in a position to carry out similar sections in their own areas.

INSTITUTION OF MECHANICAL ENGINEERS.

The general meeting of this institution was held on Thursday (by permission of the Council) at the Institution of Civil Engineers, Great George-street, Westminster. The chair was taken by Mr. THOMAS HAWKSLEY (President), and there was a good attendance.

Mr. WILLIAM P. MARSHALL (secretary) having read the minutes of the last meeting they were confirmed.

The PRESIDENT said that he was instructed by the Council to announce—first, that all the gentlemen proposed in the ballot papers had been duly elected; secondly, that, subject to satisfactory arrangements being made in the locality, the next meeting would be held at Bristol, on July 24, 25, 26, and 27—the reason of the change was that the assizes would be held on the days formerly appointed, and it was found that there would not be accomodation in the hotels for the members of this institution during the time the assizes were being held; thirdly, that a committee of the council had been appointed for the purpose of arranging terms for the premises in Westminster, deemed by the Council as suitable for the members.

The discussion on the paper "On Homogeneous Iron, and the Degree of Homogenity to be Expected in Iron produced by various Systems of Puddling, and subsequent Working," by Mr. HENRY KIRK, of Workington, which was communicated at the last meeting, would now be resumed.

An abstract of this paper appeared in the Journal of March 10.

Before proceeding to the discussion Mr. KIRK said that he had some observations to make. Since the paper was communicated to the society the subject treated had received attention at the hands of several gentlemen far more capable of dealing with it than himself, notably Mr. Isaac Lowthian Bell, whose well-earned reputation as a scientific and practical ironmaster is world-wide, and Mr. Stead, an analytical chemist, of Middlesborough. He (the speaker) wished to draw attention to three of the positions taken up in the paper, which were of general interest, whatever might be the form of furnace employed in the manufacture of iron, and would endeavour to show what had occurred in the meantime to confirm these positions or otherwise. The first position was that homogeneous iron, or mild steel as it was generally called, was the very best form of iron, and the nearer it could be approached in puddled iron the more valuable would be the product, but there was a difficulty in the way of its manufacture and use in the shape of the requirements of some engineers and inspectors, who refused to believe that wrought-iron could be good unless it was fibrous when tested by cutting through the skin and breaking over the anvil by the blows of a hammer. Two instances of these had come under his notice within the last few months. In the first a number of nicked and broken rivets showing steely fractures were returned to the firm with which he was connected. The senders were requested to test the iron for tensile strain. The tests gave 25 tons to the square inch, and the elongation was over 25 per cent. on an original length of 1 ft., thus showing an extraordinarily good quality of iron, but notwithstanding this the inspector rejected it. In the second instance, which was a precisely similar one, in which the parties were requested to test a riveted joint, they absolutely refused to give any information about the tests, though they ordered a further supply of the same quality of iron immediately, and had continued to order ever since. The second position was that puddling, being an operation in which iron was formed in a pasty condition, and every portion of the charge was not exposed to the same amount of purifying action in any furnace yet invented, it was, perhaps, impossible to ensure perfect homogenity, but this evil appeared vastly lessened by a counteracting influence at work in the furnace itself. Carbon, silicon, and phosphorus all give hardness to iron; carbon, along with hardness, gave strength, while silicon and phosphorus were said to impart brittleness.

In the experiments brought forward in the paper it would be seen that as carbon ran higher, silicon and phosphorus ran lower, and that as carbon was removed in the later stages of puddling, silicon and phosphorus increased in quantity. Mr. Bell's paper "On the Separation of Carbon, Silicon, Sulphur, and Phosphorus in the Puddling and Refining Furnaces and in the Bessemer Converter," read before the last meeting of the Iron and Steel Institute, shows that there is considerably more carbon in Bowling and in Carinthian pig which were low in silicon and phosphorus, than in Cleveland pig which was high in these elements, and that under treatment in the refinery carbon was eliminated nearly twice as much from Clarence pig (which was the Cleveland brand) as from Bowling. Then, in puddling Clarence pig, Mr. Bell shows that when a large quantity of phosphorus was left in the iron the carbon was *nil*, but with one-half the quantity of phosphorus carbon ran up to ·071 and ·184 per cent. Mr. Bell's paper further alluded to the irregularity found in the same heat puddled by the same man, as shown in the paper now before them, and gave an illustration of the uniformity with which the Danks furnace was capable of doing its work, showing in a rail made from one solid bloom, ·179 per cent. phosphorus, and in the two ends ·178 and ·176 respectively. It would thus appear that, contrary to the opinion expressed in his paper, the Danks furnace gave far more uniform results in the same heat than the ordinary, and he had no doubt whatever that when steely iron was produced this was actually the case. The rotary furnace seemed to be peculiarly adapted to the manufacture of such iron, because as the iron came into nature, as it was technically called, it gathered into one or more lumps, the portions first ready being in the middle, and other portions being added as soon as sufficiently advanced, hence the uniformity; but carry it beyond that stage and the advantage was lost, the outer portions were exposed to the action of the flame and of the cinder lying in the furnace, from which they protected the inner portions. An experiment had been made to test the uniformity of Danks iron when it was carried forward to the fibrous stage. A ¾-in. round bar about 16 ft. long, perhaps did not comprise 1 30th part of the Danks heat, yet the two opposite ends of such a bar analysed by Mr. Downar, of Workington, gave ·243 and ·323 per cent. of phorphorous respectively, exhibiting a much greater irregularity in the Danks puddling than that shown in the last five samples of table F, which represented, so to speak, the whole of an ordinary puddle heat against (say) 1-30th part of the Danks heat, and this ordinary puddle heat, it should be borne in mind, was worked specially with a view to obtain a low degree of carbon.

Mr. Stead's paper, which was read before the Cleveland Institution of Engineers, was the most interesting production. It confirmed the position that the less phosphorus there was, both in pig and in finished iron, the more carbon remained, and shows that carbon, silicon, and sulphur all solidify in cooling before phosphorus; phosphorus, therefore, more than any other element was capable of maintaining the fluidity of iron, so that there was no mystery in the fact that carbon might be all worked out of iron when there was an abundance of phosphorus present. The longer iron remained liquid the more time there was for the carbon to boil out. The researches of Mr. Bell and of Mr. Stead both proved that there was a direct action between iron and phosphorus without the intervention of carbon, but it must be remembered that this action took place in the Bessemer Converter and in the Siemens Gas Furnace at a higher temperature than was employed in ordinary puddling. It was probable, however, that occasionally a puddling furnace rises to the heat at which iron and phosphorus combined directly; at all events, it was a well-known fact that by keeping a puddle heat extraordinarily hot at the end of the operation the iron was greatly injured, though he was not aware that the cause of it had ever been demonstrated. Mr. Hopkins at the March meeting of the Iron and Steel Institute, speaking of the Danks process which his firm had worked at so perseveringly—and he might add, judging from personal observation of some 15 samples of the iron made at different times, so successfully during the last few months—stated that "if the Danks iron when taken from the squeezer was put into the furnace, and the cinder melted out of it, the result was a large-grained cold-short iron; but if, on the contrary, it went direct from the squeezer to the hammer, and the cinder was hammered out of it instead of being roasted out of it, the result was close-grained iron." This points, according to popular notions of the effect of phosphorus, to an increase of this element in the coarse grained iron. There would certainly be a great loss of carbon in such a case, and a few analyses would prove whether there was a greater gain of phosphorus than could be accounted for by the replacement of the carbon eliminated by that element.

The third position was that fibre in bar-iron was frequently produced by the diffusion throughout the mass of a thick cinder preventing the formation of crystals, or separating them from one another, and thus hiding them; but cinder did not give strength, while it often caused hot-shortness and other evils. It was easy to understand that such cinder must be of advantage in a very impure iron in the separation into different parts, as it will give greater resistance to a sudden shock, but in a high-class iron, which would bend double cold when not nicked first, and would double up under an accident, as the screwed ends lying on the table had done, the retention of cinder was a great mistake. He had had some experience in the matter, which must be interesting to the members to hear. Some time ago there was a general demand from the largest and best customers of his firm for a more fibrous and softer iron. They were told this meant a weaker iron, but the reply was that the iron was always so much above the required tests that there was no fear whatever on that score; so a more fibrous and softer iron was aimed at, and with a little practice, coupled with the reduction of the hematite pig in the mixture of iron puddled to about one-fifth of its former amount, and sometimes using no hematite at all in the shape of pig, the result was obtained uniformly and regularly, to the great satisfaction of the consumers.

But after some time had elapsed news began to arrive of breakages in actual work of articles made from the iron such as had never been heard of in the previous make. Samples of this iron were then tested of tensile strain, it was found that the strength was reduced some 4 or 5 tons to the square inch, and that the contraction of area at the point of fracture and the degree of elongation had diminished in even greater proportions. The iron has since then been made pretty much as before (a trifle softer and more fibrous, except when it was wanted to bear a very high tensile strain, in which case it was made finely granular), and no complaints had been received but such as were clearly traceable to the soft fibrous iron, which the smiths liked so well because it was easy for them to work. Another evil which, in the only instance of it he had met with, appeared to be sometimes due to the presence of cinder, in excess was warm shortness, or brittleness, below red heat, at the temperature at which wood began to carbonise. The samples he had here, which were worthy of a close inspection, were puddled in a rotary machine. He gave them to a chemist to examine, and though he did not ascertain the exact quantity of cinder, he assured him there was a large quantity present. If any of the members would like to examine them further he would be glad to give them samples for the purpose. He might mention, in conclusion, that in his practice the best quality of iron proved much the cheapest, two smiths only were required where three were formerly employed when the soft fibrous iron was being made, the breakages were not half so frequent, consequently the iron actually costs less money, as it was less than double the price; there was a great saving in fitters' wages, and in wear and tear generally; the turn-out was much greater, because there were fewer hindrances, and the general charges were reduced in every way.

Dr. SIEMENS, in opening the discussion, said that he was of opinion that the conclusions to which Mr. Kirk had arrived were well worthy of the careful consideration of the Institution. It would be hard to demonstrate how foreign matter, such as cinder, could be advantageous to the toughness of the iron. He had given the matter of puddling his attention for a number of years past. In the year 1868 he read a paper before two sections of the British Association, showing that in carrying out the boiling process properly they ought to obtain as much puddled bar, or nearly as much, as the metal placed in the furnace. This view was received with some doubt at the time, but he supported it by experiments, and to-day he wished to give some recent data in confirmation, which came into his hands only on the previous day. Iron placed in the regenerative furnace was not exposed to the oxydised action of the flame so very much as it would be in the ordinary furnace, but these results, in his opinion, ought to be obtained in puddling chambers of the ordinary form if the flame were not of a "cutting" kind. There were nearly 30 gas furnaces at work at Messrs. Nettlefold's works, Wellington, in Shropshire, and during a year and a half 12,384 tons of bars were made from 12,833 tons of metal. This showed a waste of only 448 tons, or 3·8 per cent., from single puddling-furnaces during six quarters, a result which he considered most satisfactory, and confirming what he had said on the subject. He had given his attention, further, to the production of iron direct from the ore. Singular as this might appear, it had been one of the most difficult things to accomplish; practically he believed the problem had been solved, though he would not go so far as to say it had been so commercially. Dr. Siemens then proceeded to exhibit one or two samples of iron made from Northamptonshire ore by his direct process. The example, he said, was not a rich ore, only containing 38 per cent. of iron, and from it was obtained a metal of great toughness. He might as well explain how it was that an iron ore containing so much phosphorus should produce such iron without undergoing any previous processes. In the blast-furnace the reducing power was so great that all the silicon and phosphorus was combined with the metallic iron, whereas in the process alluded to the action was much less powerful, and was only just sufficient to bring the iron to the metallic condition, leaving the phosphorus just where it was. No attempt was made to eliminate phosphorus, or to interfere with it at all.

Mr. ISAAC LOWTHIAN BELL, M.P., said that, unfortunately, he was not in the room when Mr. Kirk addressed the meeting, but he had the advantage of hearing what had fallen from Dr. Siemens. In reference to some of his observations, he would like to hear from him the exact nature of the influence he supposes the presence of cinder exercised in malleable iron, as it was there seen it was supported in a mechanical way. He could not imagine his friend meant that the mere mechanical presence interposed between two layers of iron could affect the toughness or quality of that iron. He quite agreed with him that the presence of cinder was an indication of the brittleness of the iron. With regard to the paper which Dr. Siemens had alluded to, which was read in the year 1868, there was no doubt but that it contained some very valuable information. He believed that the credit was properly due to Dr. Siemens of having pointed out that it was quite possible to puddle without any loss at all; that circumstance was entirely due to the fact that pig-iron was brought into contact with such a substance as silicon. He entirely dissented from the conclusion with regard to the possibility in any furnace, puddled or otherwise, at which a moderately high temperature was produced, of there being a perfectly reducing flame.

Dr. SIEMENS said he did not say so; he said that it was less cutting and less oxidised.

Mr. BELL went on to say that Dr. Siemens proceeded to show that from the increase of yield in a rotary furnace he gathered that there was a reducing atmosphere from the gas flame.

Dr. SIEMENS remarked that he must have explained the process very imperfectly; but what he meant to say was that he could not have a reducing flame. He quite agreed with Mr. Bell that such a thing was not to be had. They might have a large oxydised flame, and a flame so charged with oxygen, directed against the iron while in the process of balling, would cut up a considerable portion of that iron. If a flame could be had which was perfectly neutral he would expect to get from 1 ton of pig metal put into a puddling-furnace 1 ton and 1½ cwt. of puddled bar. In an ordinary puddling-furnace the flame was broken against the iron in the process of balling, which caused a great current of oxidation, whereas in the rotary furnace there was less cutting action. In a gas furnace, although the flame struck iron more than in the rotary furnace, there was less action, simply because the flame was more nearly a neutral one.

Mr. BELL denied *in toto* that there was a neutral flame which was spoken of by Dr. Siemens. So far as his gas furnace was concerned, he introduced carbonic oxide. In his regenerative furnace the gas, *per se*, was of a highly oxidised character, and Dr. Siemens would be driven into the difficulty of getting heat without combustion if he got heat independent of carbonic oxide. He maintained that there could not be a neutral flame, or anything approaching to it. A very small quantity of carbonic oxide was capable of oxidising iron under any circumstances whatever. With regard to the phosphoric acid, this was the most important question of the day. Dr. Siemens mentioned that in the blast-furnace they got phosphorus owing to the reduced action of the blast-furnace. He (the speaker) would remind him that they had a highly oxidised condition of things in the Bessemer process; they did not get rid of the phosphorus. It was independently and entirely oxidation, and was simply a question of temperature, and at one temperature phosphorus refused to combine with iron. He thought that he would be able to show that iron exposed under circumstances similar to the rotary furnace they might possibly get through a large quantity of phosphorus in the ordinary puddling-furnace. He was very far from saying when they would rid iron of the phosphorus.

Mr. CRAMPTON said that it had come under his notice that Price's furnace at Woolwich worked with a very little loss of iron and used a very small quantity of fettling, because of the method employed in the consumption of the fuel. In his own furnace, which was fed by coal dust, the conditions of combustion were still more perfect, and he obtained sometimes an increase of from 15 to 20 per cent. over the weight charged. With regard to gas furnaces, he did not believe in any of them, however they were made.

Mr. COWPER said that with regard to there being no approach to a neutral flame in the Siemens furnace he from experience could give that denial; as to getting out sulphur in phosphorus, he thought experience proved that oxide of iron was much more vulnerable to sulphur and phosphorus than iron itself.

Mr. HEAD remarked that the discussion appeared to him to some extent to have left Mr. Kirk's paper, which had reference to homogeneous iron. It was very desirable in using terms that they should have a clear idea of what they meant. As all commercial iron, whether in the form of cast or wrought, were compounds of iron and certain other substances, none of them could be strictly called homogeneous. He would presume that what they all wanted was to put iron into such forms as were required in different structures, and that it should resist no change in its form or shape. Mr Kirk had raised the question whether when iron broke with a fine steel fracture it was not better than iron that broke with a fibrous fracture. He for one was inclined to agree with the author of the paper in the view that the fracture which was fine and steely, with a maximum number of atoms, must have been in contact with one another, and must have all acted together, while with respect to iron which broke in a fibrous way it seemed pretty clear that some parts of it had severed before the rest, and, therefore, had not all acted together. He questioned whether the term fibrous was properly applicable to wrought-iron at all, for if they were to sever a rope side-ways it was clear that it would part company, not with any rupture of the fibres at all, but by pulling them apart. It was well known to iron manufacturers that the strength of bars or plates was greater in the direction of rollingthan it was across; rolling a fine grain fracture ought to be able to give greater resistance than a coarse grain one.

Mr. KIRK, in replying upon the discussion raised, said that with regard to Mr. Bell's question as to the effect of cinder in reducing the strength of iron, he could not say exactly as to what it was due, but to the extent of its presence it must reduce the strength, because it was no doubt in a powdery state throughout the mass, and, therefore, altogether lacking cohesion. They found in actual practice that a large quantity of cinder reduced the strength of the iron in a much greater degree than the probable percentage of the cinder itself. With regard to Mr. Crampton's statement of the performance of the furnace at Woolwich with respect to the yield of iron and the consumption of fettling, it appeared to him from such chemical calculations as he had been able to make that it was not possible to obtain an increase of metallic iron to such an extent as 15 to 20 per cent. There must have been some cinder present in the puddled bloom to help up the weight.

The PRESIDENT was sure that they were all much indebted to Mr. Kirk for his paper, and would accord him a most unanimous vote of thanks, which was carried by acclamation.

The SECRETARY then read a paper "On Roots' Mine Ventilator, and other applications of Roots' Blower," communicated by Mr. E. Homer Carbutt, of Bradford.

After the paper was read a brief discussion followed.

Mr. ADAMSON said that the first application of the system of revolving pistons was made by a fellow-apprentice of his, Mr. Robinson Jackson, and he applied it to a rotary engine. With respect to the subject of the paper, he thought it was a very desirable one to bring before the gathering.

Mr. HEAD referred to the blowers his firm had used, and remarked that on the whole they had worked well. The size known as No. 5 made 300 revolutions per minute, kept up a 14-in. column of water, supplied a cupola, and turned out 4 tons per hour. The advantage of the machine was that it was complete and self-contained, the duplex motion working satisfactorily.

Mr. RICHARDS suggested that the two fans should be connected by a rod, in order that they might look like locomotive wheels; their action would then be more direct.

Mr. PERKINS bore testimony to the good services performed by the blower, which, in the firm with which he was connected, had been going well for seven years.

Mr. ALLEN was of opinion that it could not be denied that iron pistons were preferable to wooden ones.

Mr. STEVENS urged that the first requisite in a mine ventilator was simplicity in construction. The one now brought forward departed from this, for if one of the wheels were to break the whole machine would be out of gear.

Mr. CARBUTT, replying to the discussion, stated that in the experiments referred to in the paper no attempt at very great accuracy had been made. With respect to the Guibal fan, one of 40-ft. diameter would weigh 40 tons, while the Roots Blower would weigh the same, the weight being distributed over two shafts in motion.

The meeting then separated until this (Friday) morning.

MANUFACTURING CHARCOAL FOR GUNPOWDER.—At the Institution of Civil Engineers, on Tuesday (Mr. Geo. Robert Stephenson, President, in the chair), a paper was read "On an Economical Method of Manufacturing Charcoal for Gunpowder," by Mr. Geo. Hayeraft, F.C.S., Assoc. Inst. C.E. By former methods of manufacturing charcoal for gunpowder it had been customary to use three retorts, side by side, heated by a furnace at the end. In some instances the gases had been utilised, but at the cost of having constantly to renew furnaces and brickwork setting, while in others

the gases had been altogether lost, by being allowed to escape either in a gaseous or condensed form. By the new method two sets of three retorts had only one furnace between them, and the flues were so arranged that each set had its own outlet to the shaft, which was controlled by a damper. The man in charge by closing one damper and opening another could utilise the heat for either set of retorts at pleasure. The gases evolved in carbonising the wood were all collected in suitable flues, and used instead of coals for maintaining the heat necessary for producing charcoal. In practice it was found that a given quantity of wood would give off enough gas during carbonisation to effect the carbonisation of a similar quantity, or nearly so. In working, one set of retorts was charged with wood, and heated in the first intance with coal, and a portion of the gas given off from the wood. When about two-thirds of the gases in the wood were evolved no more heat was required, because enough was stored up in the surrounding brickwork to complete the carbonisation. The surplus gas, therefore, was transferred to the other set of cylinders, which were now full of fresh wood, and comparatively cold. By the time the wood in the first set of retorts was converted into charcoal, and a new charge put in, the second set of retorts was able to spare its surplus gas, and so the process went on alternately day and night incessantly throughout each week. Therefore, after first lighting the furnace on Monday morning, it was only necessary to keep the furnace bars covered with ashes, chalk, or other available rubbish. By the old method about 1 cwt. of coal was required each time the three retorts were charged, but by the new arrangement 56 lbs. of coal would effect 50 burnings in six retorts, and the larger portion of the 56 lbs. was used in getting up the fire the first time.

Meetings of Public Companies.

SCOTTISH AUSTRALIAN MINING COMPANY.

The half-yearly general meeting of shareholders was held at the Cannon-street Hotel, on Tuesday,—

Mr. A. W. YOUNG, M.P., in the chair.

The notice calling the meeting was read by Mr. C. GRAINGER (the secretary). The report of the directors was taken as read.

LAMBTON COLLIERY

The company's sales of coal amounted to 75,148 tons for the half-year ending December 31, and the net profit realised from the colliery during that period to 12,557*l.* 10s., the necessary disbursements for maintenance and renewal having been made. The depression that has so long prevailed in all trade has continued to influence unfavourably the coal trade of the colony. Notwithstanding that two small additional collieries have been at work during the period now reported on, the total general production of all the northern collieries shows a falling off of 10,458 tons, as compared with the corresponding six months of 1876. The directors are glad to be able to state that the Lambton Colliery has obtained a full proportionate share of the trade. The railway and rolling stock, together with the colliery and its appliances, are reported by Mr. Croudace, the colliery viewer, to be in good order and condition.

THE CADIA PROPERTIES IN NEW SOUTH WALES.

The buildings, machinery, and mining appliances on these properties have all been repaired and put in working order. The shafts and levels have been cleared, and the timbering where necessary repaired. A certain extent of new workings has been executed, and by the latest advices 400 tons of copper ore, estimated to average nearly 10 per cent. for copper, have been raised. At the present depth, which is still a shallow one, being only 34 fms., the lodes have not been found to produce ore so largely or of so high a percentage as they did at and near the surface, whence a very large quantity of rich ore was raised, and it seems, therefore, that a more productive condition of the lode is to be looked for at a greater depth. In most metalliferous formations lodes which are found to be very rich at and near the surface, although they may become less so at a short depth down, are usually found at a further depth to resume a productive character, and to yield ore more regularly and permanently. This is a feature which is especially observable in the mineral deposits of the Australian colonies, and there seems no reason to think that these properties will form an exception to this general rule.

Two auriferous quartz reefs on the properties have been partially opened up to the depth of 120 ft., and 2 0 tons of the stone raised from one of them were, at the date of the latest advices, ready to be crushed as soon as there should be sufficient water in the creek (which had been much reduced by a severe drought) to set the turbine and stamps to work. A sufficient supply of the most approved ore dressing machinery has been sent out from this country, and one of the furnaces formerly in use having been repaired, smelting was commenced early in March last.

The completion of the railway from Sydney to Orange, which is situated within ten miles of the mines, has been announced, and was expected to be opened for traffic on the 1st of this month. The properties comprise 3272 A. 0 R. 22 P. of freehold land; plans (Nos. 4, 5, 6, 7, and 8) of the same and the workings thereon accompany the report of the directors.

COPPER PROPERTY IN QUEENSLAND.

During the half-year now under review the operations at this property have been continued; two smelting furnaces have been completed, and some necessary buildings erected. Up to Feb. 7 68 tons of copper had been made from the ore raised from the mine, the whole of which was then in course of shipment to England; and there was at the date of the latest advices sufficient ore and regulus on hand to make about 32 tons more. From the plans of this property (which consists of 1614a. 2R. 0P. of freehold land) it will be seen that but a very shallow depth, 28 fms., has as yet been attained. The same features that have been alluded to as manifesting themselves in the Cadia properties are observable in this property also. The question of the best course to be pursued in dealing with this property has been receiving the anxious attention of the board and manager. The latter having recently paid a short visit to this country, during which the board have had the advantage of personal communication with him on this and other subjects of importance in the company's affairs, has just taken his departure for the colony, where he will carry into effect such measures as may seem best calculated to promote the interests of the company in regard to this property.

ACCOUNTS—DIVIDEND.

The balance of profit shown by the general revenue account (including the sum of 5369*l.* 19s. 11d. brought forward from the previous account) is 16,634*l.* 2s 11d. The directors propose the payment of a dividend at the rate of 15 per cent. per annum on the paid up capital of the company, 140,000*l.*, free of income tax, which will require £10, 00 0 0

And to carry forward to next account ..... 6,134 2 11= £16,634 2 11

It is proposed to make the dividend payable on Tuesday, June 5.

The CHAIRMAN formally moved the adoption of the report and accounts, and the declaration of a dividend at the rate of 15 per cent. per annum on the paid-up capital, the same to be payable, free of income tax, on and after Tuesday June 5 next. He went on to say that the directors appeared before the shareholders again with very much the same sort of report which they had had so often—that is to say, a satisfactory one as respects the principal source of the company's income—the coal. Although there had been a falling off in the vend, as in the vend of all the other collieries, yet it was satisfactory that the working of the half-year enabled the directors to pay a good dividend upon the capital. As they were all aware, coal had been exceptionally cheap in this country during the currency of the half year now under review, and freights likewise had been cheap, and it was the effect of the two combined, but more particularly the low freights, which had enabled the shippers of coal to the eastern market to send from this market, whereas when coal and freights were dear the colonies got the benefit. The falling off in the entire coal fields on the Hunter, where this company's colliery was situate, was 101,000 tons in the half-year. As regarded the future of coal, of course the directors could not say very much. As a matter of fact, freights had already gone up a little in this country, and some of the colliery owners were beginning to charge 6d. per ton more for the coal in consequence of strikes. This would operate for the benefit of the company in the future, but it could not have much influence on the present half year. He was glad to say the directors knew as a fact that the price of coal in Australia was not reduced; and considering that the coal market was tightening here, and the freights too, the directors did not anticipate that there would be any reduction in the price of coal in Australia. Referring to the Cadia property, and the copper property in Queensland, he said that the present meeting had been a little delayed in order that the directors might give the shareholders the very fullest and latest information regarding those properties. He did not know that he had anything extremely satisfactory to report on with regard to those properties, but at the same time there were reasonable grounds for hoping that the company might do well with one or both of them. By the latest advices 400 tons of copper ore had been produced from the Cadia property, which would average somewhere about 10 per cent. of pure copper. They were in shallow workings at present, 32 fms. being the deepest point. With regard to the auriferous quartz reefs, there seemed a fair prospect of success. There was a quantity of stone heaped for crushing, which should have been done by water-power, but in consequence of the drought the turbine wheel had not been able to work. The rains had come, and no doubt the water in the creeks would soon run with the velocity required for the turbine. This was a cheap way of crushing the quartz, and as all the crushers were ready he hoped they would know in a short time how much gold per ton they could get out of this stuff. From the property at Queensland 68 tons of copper, of about 97 per cent., had been made and shipped, which ought to be worth about 68*l.* per ton, and there were 32 tons more which would soon be on the way. The monthly cost sheet was very considerable, but on the other hand there were just 100 tons of copper, and he had no doubt that as they went down in depth they would find the quantity of copper increase, as was the experience of the other mines in the locality. Mr. Morhead, the manager, who had been in this country, was now on his way back; and he hoped before long that gentleman would be able to report to them upon the value of the auriferous quartz. In conclusion, he referred to the death of Mr. J. Roberts, who had been for many years an auditor of the company, and said that under the power conferred by the Articles of Association the directors had appointed as auditor Mr. R. B. Ottley, a gentleman of long colonial experience, whom they had only appointed temporarily, and who would retire to-day, and it would be entirely in the hands of the shareholders to appoint him or not as they might think fit.

Alderman Sir CHARLES WHETHAM seconded the resolution for the adoption of the report.

Mr. FREWER asked for information regarding the Stockton property, and whether it could not be made remunerative at a small cost. He did not think they could congratulate themselves very much upon the result of the copper property. There was a steam engine on the property, and he thought that might have been utilised to crush the auriferous quartz at Cadia, without waiting for the turbine. He asked whether the directors had any idea what amount of gold per ton the auriferous quartz would produce? On the whole, and particularly with regard to the coal, he thought the shareholders had good reason to congratulate themselves upon the result obtained. He asked whether it was not desirable that the 10,000*l.* of reserve should be invested in something more tangible than the business of the company—in some security where it could be easily realised.

The CHAIRMAN said it would scarcely be good policy to take the 10,000*l.* out of the concern, in which it was earning good dividend, and invest it in securities where the rate of dividend must necessarily be much smaller; besides which it would be taking so much out of the working capital of the company, and, of course, it would have to be made up in some other way. As regarded the copper ore put down in the last balance sheet, it was now in *transitu*, and when realised would be brought into account. It would realise about 6000*l.*, but he did not suppose that amount would be available for dividend. As regarded the Stockton property, the directors were not advised to open it at present, as the other property was now producing as much coal as they could sell.

Mr. BOULTON, in the course of a discussion which ensued, expressed his thorough concurrence, as a professional accountant, with the views of the Chairman with regard to the employment of the reserve fund.

The report was then adopted. The retiring directors, Mr. George Smith and Mr. F. P. Ward, were re-elected. The appointment of Mr. R. B. Ottley as an auditor was then confirmed.

On the motion of Mr. FREWER a cordial vote of thanks was passed to the Chairman, directors, and manager, and the meeting broke up.

[For remainder of Meetings see to-day's Supplement.]

WATSON BROTHERS' MINING CIRCULAR.

Ten years ago the weekly information which had previously been published for a great number of years in WATSON BROTHERS' Mining Circular was transferred to the columns of the *Mining Journal*, with the following announcement; which is now reproduced in consequence of the numerous letters and enquiries handed to them of late in reply to one which appeared in the Journal on the Clementina Mine.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash or for the usual fornightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charges for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

In the year 1843, when mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS, &c.,
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MONYDD GORDDU is in 11,000 shares of 5*l.* each, of which 10,000 have been issued. The money expended on the mine has been 5000*l.* There are in reserve 1000 shares, should further capital be required. At the present time, so far as we can learn, the company owe about 1000*l.*, and have 500*l.* to expend on a reservoir; this the directors hope to pay and to do, without disposing of any of the reserve shares. Here we think they are wrong. Capital would be legitimately employed in this work, and the returns would sooner give dividends. The dressing machinery, with all the modern appliances and improvements, is capable of treating 60 tons of lead per month. The present returns are about 20 tons, worth 16*l.* to 17*l.*, at a cost of 13*l.* Last year, from above the 12 fm. level, ores were sold for 128*l.*, at a cost, including sinking shaft to the 24 fm., of 144*l.* The above answer the enquiries we have received as to the finances of this mine. As to its state and prospects, we may add that when the lode was discovered a few years ago it caused great excitement, and was visited by miners and engineers from all parts. It was a mass of ore near the surface, worth 200*l.* per fathom, and was looked upon by many as a deposit of fabulous wealth, especially as the same champion lode had, in other mines in the district, paid to the Crown royalties on ores raised worth 1,400,000*l.* The indications at Monydd Gorddu were said to be precisely similar, still cautious men, knowing that Cardiganshire mines never made continuous returns so near the surface, held aloof, and the result of the 12 fathom level, as they expected, was disappointing. At the 24 the lode has been cut, and has yielded as much as 4 tons of lead ore per fathom, and the general opinion seems to be now that there is a great future for the mine.

TANKERVILLE.—The monthly cost here, including dues, is about 1150*l.* The sales of ore are about 100 tons per month, and the last month's realised 1412*l.* 16s. The next will be 125 tons.

GLENROY.—Shares are dealt in (4*l.* fully paid-up), and the company have a working capital of 12,000*l.* There is a fine lode in the shaft, and sinking undoubtedly is an important point.

OLD TREBURGETT.—We understand the mine had, under very adverse circumstances in regard to capital, worked itself up to a small monthly profit, with a prospect of doing much better, when the failure of the Bury Port Smelting Company let it in for 1500*l.*; and to prevent the holders of the dishonoured bills of that company from proceeding against the mine, the directors are urging the shareholders to take up debenture bonds for 5000*l.*, bearing regular interest at the rate of 10 per cent. It is said the reduction made in the royalty will be more than equal to pay the interest on the debentures.

CLEMENTINA.—We defer answering the first question until we have paid a visit to the mine, which will probably be in a few days. In reference to increasing the number of shares, on the plea that many persons would gladly buy, who cannot afford to do so now because there are only 128 shares in all, and it costs a lot of money to get one share, the answer is that the great object of the holders of the 128 shares is to get the shaft down to the 35 level, when they have every reason to hope they may be able to make large profits. A 128th share would then command a much higher price, and it would then be time enough for the shareholders to determine whether they should increase the shares to the same number as D'Eresby, which would give each holder of 1-128th 40-5120th.

SATURDAY, MAY 26.—Market continues dull. Devon Great Consols improved to 5, 5⅛. Tankervilles weak; but no other alteration in prices.

MONDAY, MAY 28.—The market opened very quiet. Carn Brea, 35 to 37; Devon Great Consols, 5 to 5⅛; East Van, 4¾ to 5⅛; Glenroy, 17s. 6d. to 20s.; Glyn, 1⅝ to 1⅝; Great Laxey, 20 to 21; Leadhills, 5¾ to 6¼; North Laxey, 12s. 6d. to 13s.; Parys Mountain weaker at 8s. to 10s. Penstruthal, 8s. to 10s.; Roman Gravels, 11 to 11½ ex. div.; Rookhope, 18s. to 20s.; South Condurrow, 8¼ to 8⅜; Tankerville declined to 6¼, 6⅜; Tincroft, 16¼ to 17¼; Van, 33 to 35; Van Consols, 1⅝ to 1⅞; West Chiverton, 14 to 16; West Tankerville, 17s. 6d. to 20s.; Wheal Grenville, 25s to 30s.

TUESDAY, MAY 29.—The market still quiet. Devon Great Consols, 5 to 5¼; East Van, 5 to 5⅛; Leadhills, 5¾ to 6; North Laxey, 12s. 6d. to 15s.; Parys Mountain, 7s. to 9s.; Pateley Bridge, 2 to 2¼; Rookhope, 18s. to 20s.; Tankerville, 6 to 6½; Van, 33⅛ to 35⅛; Van Consols, 1⅝ to 1⅞; West Chiverton, 14 to 16; West Tankerville, 15s. to 20s.; Wheal Crebor, 1½ to 2.

WEDNESDAY, MAY 30.—Market more active for Tankerville, Rookhope, Derwent, and North Laxey. The former advanced to 6¼, 6¾. Rookhope, 17s. 6d. to 22s. 6d.; North Laxey, 12s. 6d. to 15s.; Van, 33⅛ to 35⅛; Glenroy, 17s. 6d. to 22s. 6d.; East Van, 5 to 5⅛; Derwent, 2¾ to 3¼; Leadhills, 5¾ to 6¼; Roman Gravels flat at 10¾ to 11¼; West Tankerville, 15s. to 20s.

THURSDAY, MAY 31.—Market quiet, and with scarcely any change in prices since yesterday.

FRIDAY, JUNE 1.—No change, and prices are as they have been all the week—mostly nominal. Tankerville are quoted higher at 6½ to 7; East Van, 4¾ to 5; Dolcoath, 32 to 34; North Laxey, 14s. to 16s.; Roman Gravels, 10½ to 11.

THE WEEK.

SATURDAY, MAY 26.—Russians closed as high as 78¾; the backwardation on Tuesday next is expected to be again as high, though the "bear" account is very much diminished to what it was a fortnight ago. Tankerville shares were quoted 6½ to 7, but this is rather nominal, as it would not be difficult to get shares considerably lower. Glenroy, ⅞ to 1; the question respecting transfer of bonus shares appears now to be set at rest. They have ample funds in hand, excellent prospects, and most likely a very short time will see the shares higher. Parys Mountain, 7s. to 9s. Leadhills, 6½ to 6¾. Exchequer shares were dealt in at 10s., Flagstaff at 2¼, Frontino at 2¾, and New Quebrada at 1⅞. North Laxey were 11s. to 13s., and Rookhope 17s. to 19s. In the miscellaneous market Hudson Bay fetched 12½, Brighton Aquarium 12½, National Safe 3½, Price's Candles 10½, and Royal Aquarium 3 3-16ths.

MONDAY.—Tankerville shares had a further drop to-day; they were quoted at the last 6 to 6½, but shares could be had at 6¼ without any difficulty. Monydd Gorddu, 2¾ to 3¼. Pennerley, ⅜ to ½. Parys Mountain were offered rather largely at 8s. without inducing business. Argentine realised 4¾; Richmond, 6⅝; and New Quebrada, 2. Credit Foncier was dealt in at 1⅜. Fore Street Warehouse at 26½, Milner's Safe at 9½, and National Discount at 9 9 16ths. Great Eastern stock fell to 48; York A, too, was dull, both suffering from absence of information as to the result of the pending negociations. Russian reached 80, but closed slightly lower. The backwardation was dealt in at ¾ per cent. Cuba Cable, 9¼ to 9½. Direct Cable, 12¼ to 12½. Globe, 4⅞ to 5. Reuter, 11½ to 12. Panama, 3¼ to 3½.

TUESDAY (Contango-day).—Russian of 1873 were continued at 78½, against 74½ last account. The backwardation, however, was but ½ per cent., in some cases less was paid. The closing price was 78*l.* Egyptian preference was continued at 54½; and the Unified at 35½ against 30¾ and 32½ respectively last account. Caledonian made up at 118¾, last time 115. Metropolitan, 108, last time 104; and Sheffield, at 69½, as against 66½ last account. New Quebrada was continued at 1¼, now at 1⅞; Richmond at 5¾, now at 6½. Richmond were dull to day and freely offered at 6¼; Roman Gravels, 10¾ to 11¼, ex. div.; Rookhope, 17s. 6d. to 20s.; Glyn, 1⅜ to 1⅝; Tankerville, 6 to 6½; Glenroy, ⅞ to 1⅛; Great Laxey, 20 to 21; Malabar, 4s. to 6s.; Parys Mountain, 7s. to 9s.; Piylimmon, 2s. to 4s.; Exchequer, ⅝ to ¾.

WEDNESDAY.—A circular from the Hudson Bay Company announces that no dividend will be declared for the half year. The shares closed flat at 11¾; this is the second omission, and there seems nothing to prevent the shares falling further. In 1875 4½ per cent. was paid. In 1871, when 1 per cent. only was paid, the shares (17*l.* fully paid) were as low as 7¾; money, however, was far dearer then. Tankerville shares came into demand to-day, a better report having been received. They could be sold without difficulty at 6¼. At the 180 east the lode is worth 5 tons per fathom. At the 180 west the lode is worth 3 tons per fathom, and there is a winze below this point worth 4 tons per fathom. They will shortly sell 125 tons of lead, which is an increase over the usual return of 25 tons. Richmond recovered from yesterday's dulness, and left off 6¾ buyers. They were wanted for Glasgow. The west discovery continues to look well. Exchequer shares were offered at 10s. and New Quebrada at 2. There were three failures announced to day.

THURSDAY.—The markets were dull at opening, from apprehensions of other failures. Four more were early announced, and afterwards two others. One of the number, it was reported, failed on exactly the same day of the month last year. Caledonian was a very good market, and touched 121. District and Metropolitan rose ½ per cent., and at the last all the markets left off strong. Tankerville improved 5s., to 6½, 7. East Van, 5 to 5¼. Aberdaunant, 13s. to 14s. North Laxey, 12s. to 14s.

FRIDAY (*Opening*).—There are three more failures this morning, and in consequence, Caledonian stock being wanted, has been as high as 12⅝, but is now 1 per cent lower. Dover, A, is down considerably. Consols are now dealt in ex div., and are quoted 94¼. Russian of 1873 is also ex div., and the price 78¼ to 76⅝. Great Eastern is down just 1 per cent, and offered at 47¼. Egyptian Preference, 54½ to 54¾; Unified, 35½ to 35¾. Mining shares are steady, without much being done. Rookhope, 17s 6d. to 20s.; Grenroy, ⅞ to 1⅛; North Laxey, 14s. to 16s.; Aberdaunant, 12s. to 14s.; Van Consols, 1¾ to 2; West Chiverton, 15 to 15; Leadhills, 5½ to 6; West Tankerville, ⅞ to 1; ditto Preference, 1⅞ to 2; Roman Gravels, 10¾ to 11, ex div.; Port Phillip, ⅜ to ⅝; Pateley Bridge, 1¼ to 2¼; East Van 4¾ to 5¼; South Condurrow, 8¼ to 8½; New Quebrada, 2 to 2¼.——*Two o'clock.*—Caledonians have been down to 120¼, but are now 120⅝ to 120⅞. British are 93⅛ to 93⅝. Great Easterns have recovered to 47⅝. Russians are slightly offered at 88, without any response. Bampfylde, 7s. to 8s.; Penstruthal, 9s. to better. Egyptian Preference, 54⅜ to 54⅞. Unified, 35¼ to 6. Pennerley shares are 11s.——*Four o'clock.*—The markets close firm, Russian and Egyptian being all higher. Great Eastern, 48¼. District, 44¼ to 45. Caledonian, 12⅝ to 12⅞; British, 93½ to 93⅝. An improvement is reported from Pateley Bridge Mines—shares unchanged. Parys Mountain weaker, at 6s. to 8s. Tankerville in demand at 6¼. Glenroy shares are enquired for. Flagstaff, 2⅛ to 2⅜. Monydd Gorddu, 2⅝ to 3, with nothing doing. East Van, 4¾ to 5; Kapanga, 1¼ to 1¾.

Birchin-lane, June 1. FERDINAND R. KIRK.

Capt Joseph Pryor, of Redruth, F.G.S., and late of New Great Consols, is about to proceed to the colonies of Australia, Tasmania, and New Zealand, as the commissioner of some London gentlemen, to visit and report on their mining properties in those colonies.

GOLD PRODUCE OF NEW ZEALAND.—The improvement in the get of gold is very gratifying, the yield for March being 31,765*l.* 5s. 4d., against 8572*l.* 1s. in the preceding month, showing an increase of 23,193*l.* 4s. 4d. The result shows that the work and labour expended upon the field in proving the continuance of the run of gold at deep levels may soon turn out reproductive. At Piako the gold has been obtained at a depth of 456 ft. At a still greater depth, 650 ft. in a drive towards the Moanataiari slide in the Karanui Company's ground gold was also struck. In addition to these discoveries, which are of importance to the future prosperity of the field, the discovery in the Moanataiari has given rise that date the wonderful return of over 26,000 ozs. since that date. The yield since the discovery have enabled the directors to wipe off an overdraft at the Bank of New Zealand amounting to nearly 6000*l.*, and to pay in dividends to the shareholders a sum of 53,940*l.*, besides adding 4000*l.* to a reserve fund, which the directors have very wisely commenced during the month. The shareholders have received 1*l.* 10s. per share dividend on 13,484 shares, and a further sum of 2*l.* 10s. per share will be paid this week, making 4*l.* 10s. per share, taken out in little over three weeks' time. These facts speak for themselves, and need not be enlarged upon. The tribute system on the field has maintained the average yield for the month, and some improvements have been noticeable in the companies' yields—of the Queen of the May, Alburnia, Red Queen, and others, which have likewise aided in the general restoration of confidence which the month's operations have produced.

HOLLOWAY'S PILLS—NERVOUS DEBILITY.—No part of the human machine requires more watching than the nervous system—upon it hangs health and life itself. These pills are the best regulators and strengtheners of the nerves, and the safest general purifiers. Nausea, headache, giddiness, numbness, and mental apathy yield to them. They dispatch in a summary manner those distressing dyspeptic symptoms, stomachic pains, fulness at the pit of the stomach, abdominal distension, and overcome both capricious appetites and confined bowels—the commonly accompanying signs of defective or deranged nervous power. Holloway's pills are particularly recommended to persons of studious and sedentary habits, who gradually sink into a nervous and debilitated state, unless some such restorative be occasionally taken.

COPPER ORES.

Sampled May 16, and sold at Tabb's Hotel, Redruth, May 31.

Mines.	Tons.	Price.	Mines.	Tons.	Price
West Tolgus	71	£7 4 6	South Crofty	48	£3 7 6
ditto	68	3 3 6	East Pool	50	3 11 6
ditto	59	5 7 6	ditto	45	3 10 6
ditto	58	6 16 0	ditto	29	1 14 6
ditto	51	7 7 6	Wheal Basset	35	6 5 0
ditto	50	6 17 6	ditto	39	5 11 6
ditto	49	7 11 0	ditto	23	4 9 0
West Seton	70	3 17 6	West Poldice	49	4 6 6
ditto	49	4 17 0	West Basset	48	4 0 0
ditto	44	4 5 6	Carn Brea	14	3 10 6
ditto	37	4 9 6	ditto	13	1 18 6
ditto	30	4 11 6	Cathedral	17	2 6 6
Mellanear	75	3 8 0	Penstruthal	15	6 10 6
ditto	59	3 14 6	Cocking's Ore	10	1 17 6
ditto	51	4 0 6	Wheal Grenville	6	10 10 6
South Crofty	59	2 16 6	Willoughby's Ore	4	2 13 6
ditto	53	3 6 6	Wheal Fancy	3	6 18 0

TOTAL PRODUCE.

West Tolgus	406	£2389 4 6	Carn Brea	27	£74 7 6
West Seton	230	999 16 6	Cathedral	17	39 10 6
Mellanear	185	672 11 0	Penstruthal	15	97 17 6
South Crofty	160	504 18 0	Cocking's Ore	10	18 15 0
East Pool	125	390 18 6	Wheal Grenville	6	63 3 0
Wheal Basset	88	488 7 0	Willoughby's Ore	4	10 14 0
West Poldice	49	211 18 6	Wheal Fancy	3	20 14 0
West Basset	43	172 0 0			

Average standard ..... £ 99 8 0 | Average produce 7½
Average price per ton £4 13 0
Quantity of ore ..... 1368 | Quantity of fine copper 101 tons 16 cwts.
Amount of money £6354 15 6
LAST SALE.—Average standard ..... £ 99 15 0 | Average produce 7¼
Standard of corresponding sale last month, £100 3 0—Produce, 7¼

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	174	£ 812 14 6
Grenfell and Sons	281½	1411 3 2
Nevill, Druce, and Co.	144	633 16 0
Williams, Foster, and Co.	70	271 5 0
Mason and Elkington	231½	1035 2 9
Charles J. Lambert	320½	1439 14 9
Sweetland, Tuttle, and Co.	146½	550 19 4
Total	1368	£6354 15 6

NO SALE on Thursday next, June 7, or on Saturday week, June 14.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, May 30: The new shaft is sunk 9 ft. below the deep adit level; we have finished timbering the shaft, and taken up all the top water, put in a penthouse, and fixed a windlass on the shaft. We hope now to continue sinking without hindrance. In the east part of the sett (Crowlwm) I have set the cross-cut to drive towards the new lode, by six men and one boy, at 10*l.* 5*s.* per fathom for the month. The forebreast is discharging water freely.

ASSHETON.—John Craze, Joel Manley, May 31: The 50, east of Mawr, on the north and south lode, is extended about 5 fms. south from junction; the part of the lode carried is about 3 ft. wide, composed principally of spar, with strong spots of copper and lead ores; set to four men, at 7*l.* 16*s.* per fathom. The 20, east of Mawr, on north and south lode, is now extended about 16 fms. south of junction; the lode in the present end is fully 4 ft. wide, composed of spar and a little copper, also lead ore, worth for the latter 8*l.* per fathom—a very promising end; set to six men, at 4*l.* per fathom, and 2*l.* per ton for all lead saved.—Tribute: Two men in back of 50, west of Mawr, at 4*l.* 5*s.* per ton. Two men in back of 50 east, at 8*l.* per ton. Two men in back of 40 west, at 8*l.* per ton. Two men in back of 20 west, at 6*l.* per ton. Two men in back of 20 east, on north and south lode, at 8*l.* per ton. Two men in back of 20 east, ditto, at 7*l.* 10*s.* per ton. Two men in back of 40, west of Browne's, at 7*l.* per ton. Two men in back of 40, ditto, at 5*l.* 5*s.* per ton and 30*s.* per fathom for rising. Three men in bottom of 40, west of Browne's, at 4*l.* 10*s.* per ton. Two men in bottom of 40, ditto, at 5*l.* per ton. Two men in bottom of 40, east of Browne's, at 8*l.* 5*s.* per ton. Two men in back of 50, east of Boundary, at 7*l.* per ton. Two men in bottom of 40, ditto, at 6*l.* 15*s.* per ton. Three men in bottom of adit, on north and south lode, south of Lindow's shaft, at 7*l.* per ton. The parcel of lead —30 tons—sold to Messrs. Nevill, Druce, and Co., and the parcel of blende—35 tons —sold to Messrs. Kenrick and Son, shall be shipped as early as possible.

BAMPFYLDE.—J. Juleff, H. T. Haley, May 29: We are pleased in being able to inform you that the stopes are improved in appearance since our last. No. 1 stope, in the back of the 112, is worth 10*l.* per fathom; No. 2 stope, in the back of the 112, is worth 10*l.* per fathom; and No. 3 stope, in the back of the 112, is worth 8*l.* per fathom. In the 112 end, west of No. 9 shaft, the lode has a very promising appearance, and continues worth 10*l.* per fathom. In the 90 end, west of No. 4 shaft, the lode is 12 in. wide, and worth 7*l.* per fathom. These ends should be pushed on with full pares of men, as it is of great importance for the future prosperity of this property, seeing that the former end is going into the ore ground that has been driven through in the 102 for a great distance, and the latter end in whole ground to the surface, and a very long distance to reach the western boundary, which is about two miles in length.

BODIDRIS.—H. Hotchkiss, May 29: All the operations here are progressing favourably, and the only alteration I have to report is a further slight improvement in the lode at the 45 yard level. The bearing part is now 18 in. wide in the bottom of the level, and producing good lead and blende.

BRONFLOYD.—Thomas Kemp, May 31: Since last report the sinking of No. 3 shaft has been completed to the 121, which has also been cased, divided, &c., from the bottom to the 110; we shall now proceed to send down the lift, and when this is done we shall be in a position to cross-cut the lode north at the 121. The stopes over the 110 continue to look well, and are worth 20, 30, and 15 cwts. of lead ore per cubic fathom respectively. We have sample 1 to day 25 tons of silver-lead ore for sale on Tuesday, June 5. Full report next week.

BRYN ALYN (North Wales).—The agent reports the 100 east as improving for ore, and letting out more water. He thinks they are close upon something good here. In the 80 there is more width of vein, which contains nice ore, and shows signs of further improvement. The stopes produce pretty good lead-stuff for washing, and it is nicely mixed with spar; the ore is not got up from the bottom quick enough, and keeps us back with the washing, but we expect to go on faster in a day or two. There is a nice vein coming in in the 90 at the west end of the mine mixed with kindly spar, and promises well for lead.

CALDBECK FELLS.—J. Polglase, May 26: The ore ground in back of drivage above the 80 is taken away, and the men are removed to the stope in bottom of the 90; the lode at this point is at present poor. The stope in bottom of drivage above the 80 level is producing about 10 cwts. of lead per fathom. We have cut through the lode south in the 10 cross-cut east from copper shaft—lode poor. Two men are placed at Carrock that the inspecting agent may have an opportunity of seeing the back of the lode.

CAMBRIAN MINES.—Thomas Glanville, May 30: ESGAIR FRAITH: We have up to this date cut into the lode south of shaft 8 ft.; the lode is composed of gossan, copper, and lead ore of a very rich character. I have now set to strip down the lode from level to bottom of shaft, and prepare for sinking as soon as possible. In the 10 east the part of the lode we are occasionally taking down is composed of carbonate of lime, gossan, and lead and copper ore. The lode in this end is now showing a better appearance than ever, and augurs well for our shortly meeting with the splendid shoots of ore seen above in the adit level east, and in advance of this end.—ESGAIR HIR: Men are now engaged with smith and carpenter in repairing and erecting rods and pulleys from the large water-wheel at Esgair Fraith to the steam-engine at Pen-y-Bwlch shaft, in order to take up the pumping when the steam-engine has drained the water down to the 10 fm. level at the above-mentioned shaft. The water will, I hope, be in fork to that level by Saturday next, by which time the rods and pulleys will be in readiness for working. We shall then stop the engine, which will save a very great item in our cost sheet for coal.

CLEMENTINA.—W. Bennetts, May 31: The water is all cleared from the shaft, and we have resumed sinking, but have not taken down the lode. The lode in the rise above the 25 is looking well, worth 1 ton of lead to the fathom. Since the water has been cleared we have been unable to resume the driving of the end for want of hands. We are preparing a parcel of lead for the market, but we cannot make the progress we wish, boys being very scarce.

COMBMARTIN.—C. H. Maunder, May 31: At the 37 the men have been stripping down the killas from off the lode, consequently very little of the lode has been taken down since last reported on, when is was worth ½ a ton of silver lead per fathom. The stope in the bottom of level is worth fully 5 cwts. of silver lead per fathom. Our surface operations are being pushed on with as much rapidity as possible.

CWM DWYFOR.—Joseph Jewell, May 31: In driving the 10, west of Stewart's shaft, I think we have touched the lode in the back of the level. I could see only a little of it to-day, should it prove to be the lode it is very large, containing quartz, iron pyrites, and spots of lead ore, and very wet. We shall by next week be able to form a better opinion. I hope next week to start the winze in the bottom of the 10 at the junction of the No. 4 lode south and the caunter branch. The men are blasting down the lode in the stope on the counter branch west of Stewart's shaft: it will yield 10 cwts. of silver lead ore per fathom; I shall get the leadstuff broken from this stope hauled to surface to-morrow, and the men will then commence to cut hitches for the stull timber.—Dressing: I have engaged a dresser, and we shall soon, therefore, commence dressing the leadstuff we have at surface.

CWM ELAN.—**H. Goldsworty, May 26: Setting Report:** The engine shaft is down 47 ft. below the 30. Our pumps will take us down about 19 ft. deeper on the depth for our next level; let at 23*l.*, to nine men, to complete it. The lode on the present bottom is looking well; it will produce 12 cwts. of lead and 15 cwts. of blende ores per fathom. The 30 west, by two men, at 6*l.* per fathom; a promising lode in the forebreast, and worth 8 cwts. of lead and 10 cwts. of blende ores per fathom. No. 1 stope on the north lode in the 30 east will produce 12 cwts. of lead ore per fathom. No. 2 stope on the same lode, by two men, at 2*l.* 12*s.* 6*d.* per fathom; worth 14 cwts. of lead ore per fathom. The stope on the south lode on the same level, by four men, at 3*l.* 5*s.* per fathom; present value is 8 cwts. of lead and 10 cwts. of blende ores per fathom. The stope in the 20 west, by two men, at 3*l.* 12*s.* per fathom; worth 8 cwts. of lead and 10 cwts. of blende ores per fathom. The stope, east of shaft, on the level on the south lode, by two men, at 3*l.* 12*s.* 6*d.* per fathom; worth 7 cwts. of lead and 8 cwts. of blende ores per fathom. The stope on the north lode, by two men, at 2*l.* 15*s.* per fathom; worth for lead ore 10 cwts. per fathom. The machinery throughout the mine is in perfect repair. Ores cleaned in the bin 4 tons of lead and 9 tons of blende.

CWMYSTWITH.—**May 28: The end in Michell's level west on Michell's lode** is still worth 15 cwts. of lead ore per fathom; the east end is still poor, but promising. We have not seen any sign of the lode as yet in the cross-cut north in the 12 over Michell's level, but shall be in line for it by the end of this week. The part of the lode as being taken down in the winze sinking under Michell's level west on the new lode is poor, although it shows spots of ore occasionally. The lode in Gill's upper level east on the new lode is 4 ft. wide, producing nice stones of ore; saving work for dressing. In the rise in the back of the Rosa level on the new lode the lode is worth 10 cwts. of lead ore per fathom. The stope in the back of Michell's level in the west end on the new lode is worth 10 cwts. of lead ore per fathom. The stope in the back of Michell's level, 16 fms. west of the rise on the new lode, is worth 15 cwts. of lead ore per fathom. The stope in the back of Michell's level east on the new lode is worth 10 cwts. of lead ore per fathom. The stope in the back of Level Fawr on the copper lode is still worth 12 cwts. of lead ore per cubic fathom. The stope in the back of the 24 over Level Fawr on Kingside lode and branches is still 9 ft. wide, and worth 15 cwts. of lead ore per cubic fathom. Our tributers are getting fair wages. The men are engaged in putting in railroad at Pughe's, so as to enable us to take the stuff direct over the burrow—that is, when it will not pay for grating. We now have three new round buddles working, and the carpenters are busily engaged at the trunks, &c. We hope to see all the slime machinery in motion in three weeks time. We shall sample 40 tons of lead ore to-morrow (May 29).

DE BROKE. J. Phillips, May 30: The casing, ladder, and other fittings in Wilson's shaft are completed, and the machine kibble is drawing from the 45 fm. level. We are opening a lodge in a strong lode containing large patches of solid ore. The 55 east is not productive of ore at present; ground hard, but the end is taking off some of water from the winze overhead; the ground in this winze has improved for sinking. The stope in roof of 35 west is worth about 14*l.* per fm. The stope in the roof of the 25 east is worth 24*l.* to 30*l.* per fathom. In the stope at the junction we are fixing a staff for rising upon the counter. In the trial drift under adit we are breaking fine rocks of ore, but the deposit is not regular, being close under the gossan. Surface work and dressing are going on steadily.

DERESBY MOUNTAIN.—W. Bennetts, May 30: We are making fair progress with driving the deep adit. The lode is about 1½ ft. wide, producing saving work for lead.

DENBIGHSHIRE.—John Pryor, May 30: I have now placed the men that were driving east to rise up in the roof of the level to get through the hard measure we have been driving in for so long a time; the result of some you shall hear in my next. We are expecting every hour to strike the new lode in the 112 west cross-cut.—Parry's Shaft: I find it best instead of clearing up the sump to start a new one more likely to come nearer into the 112 west driving underneath; this new sump will be sinking in very good ground, and I am sanguine we shall have good results therefrom. Having cleared up Parry's workings, I am pleased to say great light has been thrown on the course of the lode, and it seems to me almost certain that Parry's lode is standing intact from where we made the discovery some years ago to the depth of our 112 west. I am busy with the diallings, and this important point should be proved beyond doubt during the next week. Success I think is undoubted, and I feel confident our next report will be more cheering.—Coed-y-Fedw: The dialling is delayed until the little surface water disappears. It is now **aining.**

DERWENT.—J. Morpeth, May 29: Jeffries Shaft—Middle Vein: The 25 east continues to yield 12 cwts. of lead ore per fathom; vein 3 ft. wide, and the stopes, &c., in the back are yielding 25, 22, 20, 12, 12, 10, and 10 cwts. of ore per fathom respectively. The cross-cut in this level, opposite the shaft, is without change. The 93 west, which is 2 ft. wide, shows spots of ore occasionally, and the workings in the back are producing 14, 24, 21, and 20 cwts. of ore respectively per fathom.—Sun Vein: After the winze reached a depth of 3 fathoms under the 70, leaving a nice vein in each, and for that depth to be stoped away by and bye, a fampy sort of bed was met with one day last week, at which bed the vein is heaved to the south out of the winze entirely, and to prove the vein under this bed it will be necessary very shortly to cut south from the bottom of the winze.—North Vein: In the 50, east of Reed's, there is no change, the same remark applies to the 40 cross-cut, east of Taylor's.—Westgarth's Shaft—Middle Vein: The stope over the 64 west is still worth 1 ton of ore per fathom; the vein is 2 feet wide.—Surface: We are making preparation to lay tramway upon which to haul the refuse from the jiggers, and in conformity with the requirements of the Rivers Pollution Act. The drawing and dressing have been much interrupted of late by the breakage of the large balance-bob in the 50 in. engine, but both branches having now been resumed they shall be pushed to the utmost.

EAST CHIVERTON.—R. Southey, May 31: Since my report for the last general meeting of the shareholders the bottom end has improved in appearance; we are leaving the elvan course, and as we extend the end in the killas the lode is gradually becoming easier for driving, and more congenial for the production of mineral—this end is being driven, by six men, at 3*l.* 10*s.* per fathom. In the cross cut driving south at the 64 fm. level the ground is still hard, but we are daily expecting a change, when better progress will be made; this end is being driven, by four men, at 15*l.* per fathom. When we get through this hard bar of ground and intersection of the lode a good discovery any day may be met with; we are, therefore, doing our utmost in pushing it on as fast as possible. There is nothing new to report in the 52 or any other part of the mine. The water is falling off, and we are working with as easy cost as is compatible for the development of the mine.

EAST DARREN.—May 29: In the 130, west of Skinner's shaft, the lode is 4 ft. wide, containing occasional spots of lead, but of no value. In the 130, east of Lewis's winze, the lode is large, soft, and unproductive. In the 92, west of cross-cut, on north part of the lode, the lode is 6 ft. wide, yielding from 7 to 8 cwts. of ore per fathom. In the eastern cross-cut south, at the 80, the ground is hard for exploring, and is being pushed forward with all vigour. In the western cross cut south, at the 80, we have passed through the lode 22 ft., and have not yet reached the footwall; good branches of lead have been driven through, but the present end contains only small strings of lead—saving work for dressing. In the 80 east, on south lode, the ore is very fluctuating in value, having been only yielding 10 cwts. of lead ore per fathom, but has again improved, now worth 1 ton of ore per fathom. The tribute pitches throughout the mine are without change to notice. Our machinery is in good order. Drawing and dressing progressing regularly, with a good supply of water.

EAST VAN.—W. Williams, May 30: Tempest shaft is down 7 fms. 1 ft. below the 25; set to eight men, at 28*s.* per fathom. The 25, west of Tempest shaft, is set to six men, at 100*s.* per fathom; this end looks more encouraging than it has for some time. We have now a nice leader containing good spots of lead, although not sufficient to value. The same level, on the branch, still looks encouraging, and showing nice spots of lead occasionally; set to six men, at 80*s.* per fathom. The stripping down the lode at A cross-cut is set to eight men, at 80*s.* per cubic fathom. We have taken away the lode for 9 ft. west of A cross-cut, and there encountered a bed lying like a cap upon the ore ground, and dipping westward 6 ft. in a fathom. This shows us the reason why we did not intersect this ore ground at the bottom of the winze, because it dips westward 15 fms. We shall soon have Tempest shaft down to the 40, when we shall have another trial at it.

GLASGOW CARADON CONSOLS.—William Taylor, Wm. J. Taylor, May 29: There is no change in the new shaft, the sinking of which is being pushed on as fast as possible. In the 78 east the part of the lode carried is worth 15*l.* per fm. Cutting in the south at this level we have just met another branch, worth from 7*l.* to 8*l.* per fathom. We are going on further south, believing there is more lode; when satisfied on this point we shall open east and west on this branch. In the midway we have not met with any more lode. Cutting in south, which is still letting out water at this level west, we are driving on a branch which is worth 8*l.* per fathom. No change in the 65 east on Harvey's north lode. Arrol's lode in the 65 west is worth 7*l.* per fathom. The Caunter lode in the 52 fm. level east lode is chiefly composed of mundic, with stones of ore. This level west is worth 5*l.* per fathom. The stopes and pitches throughout the mine continue to turn out their usual quantities of ore, varying in value from 12*l.* to 25*l.* per fathom.—Surface Work: The whim engine is all taken out, and being removed to the new shaft. The masons have commenced building the house, and everything with it is being pushed on as fast as possible.

GLENROY.—R. Rowe, May 29: I was at the mine to-day and underground, but am unable to report anything new from my last. The lode at the shaft is from 6 to 7 ft. wide; the shaft is down 8 ft. We are now cutting out a small tip lodge in the north end, which will take about a week. The men will then be set a contract for 10 fms. to sink with all speed. I do not see any change in the 50 and 40 stopes; in the latter there is an appearance of the lode being likely to go behind the shaft as we draw near to it; should it prove so it may be of importance and value. We have cut several branches in the 28 cross-cut, but no regular lode yet. In the adit end north the lode is 4 ft. wide, letting out a great quantity of water, and showing a small quantity of copper and blende.

GLYN.—James Roach, May 28: I have been underground here to-day. The engine shaft has not yet reached the footwall of the lode. We have 5 ft. more of pump to sink for, which will make the shaft 22 fms. deep under the 28 fm. level perpendicular. When that is done I shall cross-cut the lode. There is evidently a great change in the underlie. We found some nice bright cubes of lead in the shaft this morning. The winze under the 28 west, on south part of lode, is being sunk with the usual dispatch, but there is no lead of consequence in it yet. The stope in roof of the 15, east of rise, is producing very fine solid stones and a mixture of lead, but irregular in quantity, although sufficient to leave a good profit. The engine and all machinery in perfect order, and working well.

GOGINAN.—May 29: In the 130, east of western shaft, there is a large hard lode, and the portion carried is producing ¼ ton of lead ore per fathom. The same level west is also in a large lode, yielding at present good saving work. In the winze sinking below the 110, 55 fms. west of Bryn Pica shaft, the lode is worth 15 cwts. of ore per fathom. The lode in the stope over the 120, east of Jones's winze and west of western shaft, continues to produce from 18 cwts. to 1 ton of ore per fathom. In stripping down the lode to the tull width at the same level, about 45 fathoms west of Bryn Pica shaft, it is producing 15 cwts. of ore per fathom, and at a point about 70 fms. west of Bryn Pica shaft it is worth 12 to 14 cwts. of ore per fathom. Here a winze is started to sink, by six men, in a lode worth 14 cwts. of ore per fathom. In the 100, east of Bryn Pica shaft and the tribute pitches, there is no change worthy of remark. At the surface all things are being pushed on as fast as possible, and we have the jigger, with framework for elevator, all fixed, and immediately the remainder of the new machinery for dressing floors arrives (which we daily expect) it shall be erected without delay. We have also made the necessary excavations for fixing the stone breaker, &c., for the same, which will be completed about the end of the week. Our parcel of ore sold yesterday realised 17*l.* 4*s.* 6*d.* per ton.

GORSEDD AND MERLLYN CONSOLS.—W. Edwards, May 30: In the driving west from the bottom of the shaft the lode maintains its great strength and character, producing splendid lead ore. In the eastern level more ore is showing in the forebreast, but we are expecting to announce an important discovery here quickly, for a fine course of ore is above our heads, and will die down to this level. In the No. 2 sump we are sinking; here also we are going down in splendid ore. I am also pleased to say that this remark will apply to the driving east from No. 1 sump, which is now at the back of the shaft. At our new operation upon Fielding's land the men have reached the bottom of the shaft, and will now proceed to explore for lead ore. On the Gorsedd lode the men are making fair progress, and since my last the men have been taking out some lead ore therefrom. Operations on the dressing floors are proceeding in a very satisfactory manner, and we shall be ready with our 50 tons on June 12.

GREAT DYLIFFE.—Evan Evans, May 29: Dyliffe Lode: At the 132 east the lode is left unstripped until a communication is effected with the level above for ventilation, as mentioned last week. Next week I hope to be able to report this has been done. The stope in the back of the 132 east is about the same as reported last week. The winze in the bottom of the 120 is down about 10 fms., and will be through in another week. At the 47 east there is a strong lode, containing a large quantity of blende and some lead. It is looking better than last week, and we are here nearly under the place where a good branch of ore was taken from the level above.—Llechwedd du Lode: The stopes in the back of the 105 are of about the same value as mentioned last week.—Craigadlin Lode: At the 45, west of crosscut two men are driving a cross-cut through the lode, at 10*l.* per fathom. This cross-cut some years ago was driven about 6 fms. into the lode, but not through it, and as the richest part is generally in the south side we think it better to have this cross-cut through. At the west end of the 45 we are stripping the lode. A week ago we had only two men in this place, but seeing it so promising we put two more there, and this week it looks better. We shall sample 60 tons of lead ore to-morrow, for sale on June 6.

GREAT LAXEY.—W. H. Rowe, May 30: The deepest level driving south of engine-shaft continues in a strong and open lode as yet, containing but little ore to value. Very little change has taken place since last report in the Welch shaft sinking below the 235; the part of the lode carried in this level driving north is 8*l.* per fathom. The same level south from winze 24 per fathom. The end driving north of this winze continues in a rich lode worth, as last reported, 80*l.* per fathom. The 220 fm. level end is worth 8*l.* per fathom; but there is very little doubt, from what is to be seen in the rise and the stope back from the end, and also in the winze between these points, that the main part of the lode (and in all probability the most valuable) is standing to the east of the present driving; it is to be hoped we may find it so, and that it will be a repetition of what has been recently laid open at the 310. In cutting down the sides from the roof of the stope we find the intervening rock increasing in width, and thus strongly supporting this opinion; the present value of stope is 5*l.* per fathom. The 2 0 north is worth 25*l.* per fathom. The end south of No. 2 cross-cut 30*l.* per fathom. On the same part of the lode driving southward is in the 200 the forehead is worth 60*l.* per fathom. The stopes about this part of the mine have not materially changed in value of late.—Dumbell's: The 2.5, driving south of shaft, is worth 25*l.* per fathom, and likely to improve. The ends and stopes in this direction, with the exception of the 170 driving north, are at present poorer than for some time past. The improvement in the latter forehead, and the position and character of the lode there, lead us to hope there is a good chance of a better lode or branch parallel here also. Before proceeding further with the Glen adit we thought it desirable to be thoroughly satisfied that the line of the lode has been completely proved at and underneath the washing-floors. In the cross-cut forehead, immediately under the river, there are now very encouraging indications that it is still improved, and the lode close at hand. A great deal of work and temporary stoppage of several workings as a matter of course has seriously interrupted the drawing of stuff from underground. The locomotive engines are now, however, at work (and doing satisfactory duty) from the engine and Welch shaft to the floors. The work of straightening the remainder of the day level to Dumbell's shaft is also being proceeded with. By extra exertion a very short time will enable us to recover and make up for the unavoidable temporary stoppage of the output of ore.

HARWOOD.—W. Tallentire, May 25: Hershlip Level: In driving east we have now cut through the vein or branch running north and south. It is about 2 feet wide, with a throw of near 3 ft. east check up; composed of iron rider, clay, spar, and spot of lead at the bottom of the limestone, and looks very likely to be productive higher up in the limestone. We have, however, a powerful vein known to have been productive lying only 6 or 7 fms. before us, and this being our setting day I have had the advantage of the opinion of Mr. Wm. Vipond, of Green Hurth Mine, and Mr. Thomas Watson, of the Teesdale Mine, who agree with me that, although it is very probable the branch we have cut will yield ore on being tried, it will be better to drive on to the main vein, rise in it into the part of the limestone, usually most productive, and then cross-cut back and work both vein and branch. The level is set for the month, or a vein at 5*l.* 13*s.* per fathom, the men delivering the work to surface.

HINGSTON DOWN CONSOLS.—James Richards, May 28: I beg to hand you my report for the meeting appointed to be held on May 30, showing the work accomplished during the last six months, and the present state and prospects of the mine. Bailey's shaft is in regular course of sinking below the 160, and is now down to the next intended level (the 170) 8 fms. The remarkably heavy rains in the early part of the year delayed the sinking, but fair progress is now being made, and the lode is improving as depth is attained; in the last 9 ft. sunk the lode has been opened into and found to be fully 5 ft. wide, of an exceedingly promising character, containing capel, quartz, mundic, and an exceedingly productive value (for length of shaft) from 2*l.* to 10*l.* per fm; present bottom worth 15*l.* per fathom. The 160 has been driven west about 35 fms., the lode being large (5 ft. wide), varying in value from 7 tons of ore, or 25*l.* per fathom, to 4 ore, or 15*l.* per fathom, up to the point of communication with the 160, east from Nicholls's winze. The stope in bottom, for completion of the 160 (putting in tramway, &c.) is worth 15*l.* per fathom; this work will be accomplished in about a month, when the 50 will be driven westward from the winze (Nicholls's) in under the productive ground above. The lode in the stope in back of the 160, west of Rowe's winze, is worth 6 tons of ore, or 18*l.* per fm. The 150 has been driven west, on the north part of the lode, about 7 fms.; some portion of this drivage has produced 2 tons of ore, or 8*l.* per fathom. The 150 has been driven west, on the south part of the lode, about 7 fms.; this lode has improved, in places worth 3 and 7 tons of ore per fm. In the present end the lode is 5 ft. wide, worth 5 tons of ore, or 20*l.* per fm. The lode in the stope in back of the 150 west is worth 5 tons of ore, or 15*l.* per fathom. The 140 west has been resumed, and the lode behind the end is worth 2 tons of ore, or 10*l.* per fathom. The present end, which is in granite ground, is producing rich stones of ore, and is promising improvement. The stope in back of the 140, east and west of Chynoweth's rise, is worth 5 tons of ore, or 20*l.* per fathom. The 120 has been driven west of the cross-cut, on the south part of the lode, about 7 fms., the lode varying in value from 8*l.* to 4*l.* per fm. The 110 has been driven west of cross-cut, on the south part of the lode, about 15 fms., the lode in the former 8 fms. proving worth on an average 3 tons of ore, or 12*l.* per fathom. In the latter 2 fms. the lode has been disordered by a cross-course, and is for the present in unsettled ground. The tribute pitches are, on the whole, yielding fair returns of ore. In conclusion, I would observe that the prospects of the mine have improved, and are very encouraging, the lode at Bailey's shaft at the deepest point reached, being of large size and great promise, and no ore having been met with at the shaft for the past 30 fms., the present discovery is of great importance, a fresh run of ore ground, in all probability, being now reached. The 160, west of Rowe's winze, has proved productive home to Nicholls's winze. About 4 fms. west of the former it is intended now the communication is made to sink a winze in bottom of the level, where the lode is worth 5 tons of ore, or 20*l.* per fathom; and another winze will be commenced in bottom of the 160, under Nicholls's winze, about 20 fms. west of the above, where the lode is also worth 20*l.* per fathom. The 150, on the south part of the lode, as also the 140, 120, and 110, will materially assist the returns, and will enable us to maintain the present average rate of samplings of ore of fair fair quality—from 160 to 170 tons—at a monthly cost of about 600*l.* The engine-shaft will be down to the required depth for another level in about three months from the present date.

HOLMBUSH.—H. Bennett, May 31: The shaftmen are making fair progress in fixing the bottom drawing lift at the 80. We have commenced to clear and secure the 80 west of the engine-shaft. There is no alteration in any of our tribute or tribute operations since last reported on. We have commenced to draw at Lord's shaft from the 60, and the skip works very well. All our surface operations are progressing satisfactorily, and the machinery is working well.

LADYWELL.—A. Waters, May 30: No change in the 32 south for the past week. The 16 south is going forward in a wide soft lode, and yielding solid lumps of lead ore, with a slight sprinkling of carbonate of lead in the gossan. We shall have a good lode here soon. The stops in the back of the adit never looked better than it does now, and the men are getting good wages at 50*s.* per ton delivered into machine kibble. The new shaft on the mountain makes reasonable progress, and the lode continues to yield solid lumps of lead ore. We shall to-morrow sample 20 tons of lead ore for sale next week.

LOVELL (THE).—J. Prisk, E. Kempthorne, May 31: The following is a copy of our setting, which took place on Saturday, the 26th inst.:—Stack shaft to sink below the surface, by six men, at 12*l.* per fathom; lode at present small, and ground rather hard. The 30, to drive east of new shaft, by six men, at 14*l.* per fathom; the lode is 4 ft. wide, and worth 10*l.* per fathom. The 35, to drive and stope, by six men, at 7*l.* per fathom; the lode is 10 ft. wide, and worth 20*l.* per fathom. The stope in the back of the 36, by six men, at 7*l.* per fathom; the lode is worth 15*l.* per fathom. The stope in the bottom of the 30, by six men, at 6*l.* per fathom; the lode is worth 12*l.* per fathom. The intermediate level between the 20 and 30, to drive, by four men, at 9*l.* per fathom; the lode is worth 18*l.* per fathom. The quality of the tinstone has been better than usual during the last two months, which helps us a little in the returns. We have commenced costeaning in the new eastern ground, and have already succeeded in finding a lode containing tin, and we intend during the summer months to keep a pare of men at this work, believing that fresh discoveries will be made thereby.

MELLANEAR.—John Gilbert, May 30: On Saturday last we set the following bargains: The 50 to drive west of the skip-shaft, by six men, at 3*l.* per fathom; the lode is about 2 ft. wide, producing a large quantity of mundic, and some good stones of copper ore, and looking very promising for further improvement. The 67 to drive west from the skip-shaft, by six men, at 3*l.* 10*s.* per fathom; the lode is 4 ft. wide, and worth 3 tons of ore per fathom. No. 2 rise in the back of this level, by four men, at 3*l.* 10*s.* per fathom; the lode is 4 ft. wide, and worth 3 tons of ore per fathom. No. 3 rise in the back of this level, by two men, at 3*l.* per fathom; the lode is 4½ ft. wide, and worth 5 tons of ore per fathom. The 90 to drive west of the skip shaft, by six men, at 4*l.* per fathom; the lode is still worth 3 tons of ore per fathom. Gundry's shaft to sink below the 80, by nine men, at 27*l.* 10*s.* per fathom; the ground is just the same as for some time past—we sunk last month 1 fm. 5 ft. The 80 to drive west of Gundry's shaft, by six men, at 5*l.* 10*s.* per fathom; the lode is 4 ft. wide, and composed of spar, mundic, and blende, and worth 2 tons of copper ore per fathom. The rise in the back of this level, east of shaft, is communicated to the 70. We shall put these men to cut ground for plat, &c., and to make all other necessary preparations for sinking the skip shaft below the 90, which will take about a month before we shall be ready to sink. The 70, east of Gundry's shaft, by four men, at 3*l.* 5*s.* per fathom; the lode is producing less spar, and is worth 1 ton of ore per fathom. We have set a rise in the back of this level, about 4 fms. behind the present end, and a little to the west of the rise that we have holed from the 30, to four men, at 3*l.* 10*s.* per fathom; the lode is 4 ft. wide, and worth 4½ tons of ore per fathom. The 70 fm. level, west of shaft, by two men, at 4*l.* per fathom; the lode is 5 ft. wide, and worth 2 tons of ore per fathom. The 60, east and west of shaft, by six men, at 3*l.* 10*s.* per fathom; the lode in each end is still worth 3 tons of ore per fathom. We are making all possible speed with our surface operations, and hope to complete the new reservoir by the early part of next week. All our machinery and pitwork are working very well, and the water at the old engine is now back to nine strokes per minute.

MONYDD GORDDU.—Richard Rowse, May 30: We are still working in a good lode at the 24 of about the same value as reported last week—4*l.* per fm. I have placed six men to drive on a part of the main lode between the adit and 24. To date it looks promising; worth 15*l.* per fathom. The stope over the drift on the south lode is yielding fair quality stuff, but becomes less productive as we approach the surface. All work is going forward much as usual, with good supply of water. Before my next report the present contracts will end, when a fuller one shall be sent you.

NEW SOUTH MERLLYN.—R. Rowland, May 30: The 80 yard level south is improving, the lode being 2 ft. wide, with lead mixed all through the end. The men are making good progress with the north sump in exploring the great swallow, which proved so rich above our heads. When we are a little deeper I expect to meet with very good results from this point.

NORTH LAXEY.—R. Rowe, May 29: I have now come from underground, and am glad to report a decided improvement in the lode in the shaft sinking below the 136. We have been having good stones of lead for some time. To-day, however, we broke some good saving stuff at the deepest point, with every appearance that we are close upon a good lode. The stopes in the 121 and 110 are worth about 15 cwts of lead per fathom. In the 70 cross cut, south of south shaft, we have not yet cut the new lode found in the 60. We have met with two small branches containing lead, and the rock is mineralised, and of a very favourable character. In the roof of the 60 fathom level the lode is continuing its course, and looking well, worth quite 1 ton of lead per fathom. The stope in the 60 sole is worth 1 ton per fathom. Two stopes in the 50 roof and sole are worth 1 ton of lead each per fathom. The lode in the 40 end is 2 ft. wide, yielding good stones of lead.

NORTH TRESKERBY.—A. Nancarrow, May 26: We set this day six pitches to 17 miners at remunerative tributes at and above the adit level. Also re-set a cross-cut driving south-west of new engine-shaft to intersect other lodes at 3*l.* 10*s.* per fathom. Also a rise from the back of the deep adit to communicate with the level above at 6*l.* per fathom. We are making good progress in sampling, and hope to have a nice parcel of ore for sale at our usual ticketing.

OLD TREBURGETT.—**W. Hancock, W. T. Bryan**, May 30: In the 102, south of the engine-shaft, the lode is larger, and producing more ore. No. 2 winze, under the 90, has a little improved. The 40, south of stamey's shaft, is looking more promising. Other places are much the same as last reported. We sampled to-day (computed) 28 tons of silver-lead, for sale to-morrow week, and are preparing the sulphur mundic sold to Messrs. Vivian and Sons.

PANDORA.—Henry Nottingham, May 30: New Lode: The 33 end driving south is improving; the lode is widening, and showing a good mixture of lead and blende on the hanging side, and letting out water freely. This is beginning to drain off the water to the 23, so that I am in hopes of soon seeing it all disappear there, that we may commence sinking on the ore going down in bottom of this level. The 33 cross cut, driving east from engine shaft, is now progressing more satisfactorily, and I expect to see better progress after we are clear of the cross joints. We did nothing in the bottom last week through breakages in the small pump rods; all is working well now. The 23, driving north, presents a better appearance, there being more lead and blende mixed through the lode, but not enough to value. No 1 stope, over this level, is worth ½ ton of lead and 15 cwts. of blende to a fathom. No. 2, stripping behind the end, equal to the above. The lode in the 13 end is small and shaley; I expect an early change here, as we are nearly up to where the lode should make a bend similar to what we have below.—Goddard's Lode: No 3 stope is poor going north; we shall try a place in the back of the 23, where the lode appears to be making a little lead upwards. The No. 4 stope, south of No. 3 winze, is worth 15 cwts. of lead and ½ ton of blende to a fathom. The stope over the 13, south of No. 3 shaft, is worth ¼ ton of lead and the same of blende to a fathom.—No. 5 Shaft: We have stripped the lode down to the bottom of shaft, and shall now proceed to take down the lode. We cannot yet say what is in it, but I expect it will be saving stuff.—Surface: The surface work is progressing satisfactorily. The lead just sold will be sent off on Friday. We have a good pile of blende towards another sampling, which I expect will reach 35 tons this time.

PARYS MOUNTAIN.—T. Mitchell, May 28: The 90 cross-cut south, by six men, for the month, at 12*l.* 10*s.* per fathom; we have just passed through a strong branch containing copper ore and sulphur, and the ground is mixed up with more quartz than usual. Stopes at the intermediate level, over the 90, by four men, the month, at 6*l.* per fathom, lode worth 4 tons of copper ore and 2 tons sulphur per fathom. Stopes in back of the 65, east of rise, by six men, at 6*l.* per fathom, lode yielding 3 tons of copper ore and 1 ton sulphur per fathom; we expect this piece will improve shortly, as the lode seems to be opening out wider. Stopes over the latter, by six men, at 6*l.* 10*s.* per fathom, lode yielding 5 tons copper ore and 1 ton sulphur per fathom. Stopes in back of the 45, west of rise, by six men, at 6*l.* per fathom, yielding 5 tons copper ore and 1 ton sulphur per fathom. Stopes east of rise at this place, by six men, at 6*l.* 10*s.* per fathom, yielding 5 tons copper ore and 1 ton sulphur per fathom. Stoping out the lode in the side of the level, at the 45, by eight men, at 6*l.* per fathom; the lode is of good width, and will produce 6 tons of copper ore and 1 ton sulphur per fathom. Stopes at the 45, east of cross-course, by six men, at 6*l.* 10*s.* per fathom; these are looking a little better, and will yield at present 5 tons copper ore and 2 tons sulphur per fathom. A trial bargain at the

80, east of cross-course, by one man, at 3/. per fathom; this is to prove a piece of ground which is now turning out some good copper in back of the 65, immediately over this places; 3 or 4 fms. driving will prove it. We have set 12 tribute pitches to 20 men, at the usual prices.

PARYS MOUNTAIN.—T. Mitchell, May 31: We have another small branch about 1 in. wide of good copper ore in the 90 cross-cut south to-day; ground rather stiff for cutting. All points of operation are going on in the usual regular way.

PAIELEY BRIDGE.—C. Williams, May 31: I am pleased to be able to report that the Rake vein on the 30 east has again this week very much improved, being now 2 ft. wide, and carrying a rib of ore along the north wall 9 in. wide, of nearly solid metal, producing at least 1½ ton per fm, and I am now fully convinced that we have entered into the tail end of the great deposit that went down under the 20. The same vein in the 30 west is strong and masterly, and the part carried in the drivage is 6 ft. wide, composed of fine matrix and lead ore, producing 1 ton per fathom; the ground is moderately easy to work, and good progress is being made. The south cross cut in the 20 west to cut the Lumb vein is progressing favourably, and we are now close upon it. The ground in the end is strong limestone, inter-mixed with spar and branches of ore; water issuing out freely. Pidding's vein in the 20 north west is 4 ft. wide, and slightly improved, producing 22 cwts. of lead ore per fathom; the tributers are bringing out some rich work to the cross-ing-floors this week. The Sun vein in the 30, east from the bottom of the new shaft under Gillfield level, is without any change, and producing 25 cwts. of lead ore per fathom. Dressing of ore is being carried on regularly, and machinery all in good repair.

PEDN-AN DREA CONSOLIDATED.—Wm. Tregay, Wm. Prideaux, J. Pope, May 31: The mines are looking quite as good as they have been for some months past, producing satisfactorily. We sold yesterday, the 30th inst., 10 tons 7 cwts. 1 qr. 5 lbs. of black tin for 439/. 13s.

PENNANT.—May 30: In the 80 yard level, driving east, the lode is in hard ground, but carrying one of the finest defined footwalls that I have seen for a long time. Before long I have no doubt we shall have an important change here, for we are approaching the various runs of ore that have passed down from the 20 and the 40 yard levels. When these are available for our workings at this point I look for considerable returns. At the bottom of this level we have passed through very good ground, which, as I have stated previously, is a sure indication of the char-acter the lode will assume when the deeper levels are approached. We are mak-ing all the haste possible about the shaft, and I expect to be able to sink on the lode for the whole distance down. Our stopes are much as usual, and we are busy preparing another parcel for the market. Machinery working well.

PLYNLIMMON.—J. Garland, May 24: New Shaft: All connections of pump-ing-rods will be completed to-day; I hope to get the water drained and the shaft cleaned up to-morrow, when sinking will be resumed at once. In Jones' winze sinking below the 24, fair progress is being made; the lode during the past few days has been poor, but is now again improving, and produces saving work for dressing. In Herbert's winze, sinking below the same level, the lode is still dis-ordered, producing ½ ton of lead ore per fathom; in this winze, owing to the rapid underlay of the lode, progress is slow. The stopes throughout the mine con-tinue to yield lead ore as for some time past. Drawing and dressing are being kept on with regularity, with a fair supply of water. Tenders for the 20 tons of ore sampled on the 22nd are due on Tuesday the 29th current.

PRINCE OF WALES.—J. Andrews, May 30: The lode in the stope in bottom of the 55 west is opening out very encouragingly, and is now 3½ ft. wide, worth full 18/. per fathom.

RELISTIAN CONSOLS.—J. Curtis, May 31: The lode in the 24 is heaved south a little by the cross branch which we have passed through, and are now cutting into the lode again, which contains tin, and letting out a quantity of water. In the 10 end the men are now stripping down the south part of the lode with good stones of tin in it; all saving work for the stamps. The stopes are turning out their usual quantity of tin. We shall begin burning our tin on Monday next.

ROMAN GRAVELS.—A. Waters, May 30: The 106, south of flat-rod shaft, is worth 1 ton per fathom; the same level north is worth ½ ton per fathom. The winze in the 95 fm. level, south of the above shaft, is worth 1 ton per fathom. The winze in the same level, north of shaft, is worth 2 tons per fathom. The 95, south of the new engine-shaft, is worth 2 tons per fathom. The stope in the 9 north, north of Tetley's winze, is worth 1½ ton per fathom. No. 2 stope, north of ditto, is worth 2 tons per fathom. No. 1 stope, south of Dorricott's winze, is worth 2 tons per fathom. The stope in the 95, south of the caunter lode, is worth 1 ton per fathom. The stope in the 80, north of the new shaft, the lode is worth 2½ tons In the new winze below the 80, north of the new shaft, the lode is worth 2½ tons per fathom. In No. 1 stope, in the 80, south of Wilks' winze, the lode is worth 3 tons per fathom. No. 2 stope, south of ditto, is worth 3 tons per fathom. No. 1 stope, north of the winze, is worth 2 tons per fathom. No. 2 stope is now worth 1½ ton per fathom. The stope in the 80, south of Bishop's winze, is worth 1 ton per fathom. The 65, south of Stokes' winze, is worth 1 ton per fathom. Mat-thews' winze, below the 65, is suspended, on account of a considerable increase of water; we must now wait for the 80 end to drain this ground. Thomas' winze, south of the above, is worth 2 tons per fathom. No. 1 stope, in the 65, south of Stokes' winze, is now worth 1½ ton per fathom. No. 2 stope, 3 tons per fathom. No. 3 stope is also worth 3 tons per fathom. No. 4 stope, 2 tons per fathom. No. 5 stope, 2 tons per fathom. The drift above the 80, north of Powell's winze, is worth 4 tons per fathom. The stope in the back of the drift north is worth 3 tons per fathom. The 50, south of Stokes' winze, is now worth 3 tons per fathom. The middle level, south of Glover's winze, below the 6 , on east lode, is worth 1 ton per fathom. The stope in the back of the level, south of the winze, is worth 2 tons per fathom. The middle level, north of Glover's, is worth 1 ton per fathom. We sell 50 tons of blende on Friday next.

ROOKHOPE.—James Blenkiron, May 28: At our setting last week we arranged to complete the Gin shaft between the 25 and 42; a communication has been made since I was over, but the rise requires enlarging, timbering, and conductors fixing, which are now being proceeded with. We have arranged for six men to drive for-ward the 42, at 80s. per fathom. I think we are entering upon some good ground, and a good course of ore with this level. There are four men stoping or cleaning ground on the back of the 25, where ore has been left, before filling up and secur-ing the ground.——Daywork: There are four men rising from the 25, at 35s. per fathom, for waygate into the workings above the said level to the kiln or large hopper for house underground. There are four men stoping on the back of the 15, at 30s. per fathom; worth 20 cwts. of ore per fathom. Four men stoping on the back of the 15, at 27s. per fathom, taking off the side and cleaning the ground previously worked on one side of the lode; worth 25 cwts. of ore per fathom. There are five men timbering and completing the Gin shaft between the 25 and 45. We are doing our utmost to get ready for dressing on the high floors by the pay, or end of this week. Outside operations, dressing-floors, water-courses, and reser-voir, have progressed favourably during the last fortnight. We have a good deal of work yet to do in connection with the high floors, but I trust we shall get to work dressing this day week, proceeding with the floors or convenience in the meantime. The general appearance of the mine is encouraging, and we have con-siderable reserves of paying ground above the 15, where only one side of the lode has been worked, and in some parts entirely whole. This will keep us going until the 42 opens and proves the ground between the 25 and 42. I purpose being over at the mine again this week, when I will write you again respecting the sampling, as we have been obliged to dress a large quantity of poor stuff from the rise on the back of the 42. It has produced ore slowly. We will sample as much as possible, and will write you more fully at the pay.

SAINT PATRICK.—W. Francis, May 30: We have just seen a little lead ore in the joint driving west from sump, at the 120 yard cross cut. We have also found traces of ore in the last east and west joint, cut close to the forebreast of this cross-cut, and are now pushing the cross-cut on with all dispatch, as appearances gene-rally indicate an approach to another main vein. The chert driving is at present rather tighter than it has been, but the ground is quite as favourable, and our move-ments altogether are satisfactory.

SOUTH ALE AND CAKES.—J. Mayne, May 31: The lode in the new shaft is looking very well, indeed better than could be expected at the depth, and no doubt in a few fathoms sinking a good course of copper ore will be the result; the shaft almost pays for sinking now. I look upon this as an important discovery in this celebrated mining district. The other points of the mine are without iteration.

SOUTH CONDURROW.—Wm. Rich, Wm. Williams, Hy. Abrahams, May 29: The Plantation shaft is nearly made complete to the 20. There is no lode yet met with in the 10 cross-cut north; the ground is easier for driving in the 30 west to-wards the Plantation shaft. The 40, east of engine shaft, on the great lode, is worth 9/. per fathom; the 40 west is worth 7/. per fathom. We have been obliged to put in new strapping plates for the main rods at the engine shaft, the old plates not being sufficiently strong. The 50 end, east of King's, is worth 12/. per fathom. The rise in the back of this level is worth 10/. per fathom. The 50 end west carries a little tin. The 60 west, on West Basset lode, is in easy ground. We shall cross-cut to the main lode after we have driven a few fathoms. The rise in the back of the 60 is worth 8/. per fathom. The lode in the bottom of this level is worth 18/. per fathom. The 70 end west has a very promising appearance; the lode is worth 14/. per fathom. The rise in the back of the 70 is worth 12/. per fathom. The 82 end east is worth 7/. per fathom. The winze in the bottom of the 82 west is worth 7/. per fathom. The 93 end west is worth 10/. per fathom.

SOUTH DARREN.—H. James, A. Gundry, May 30: Setting Report: No. 1 stope in the back of the 90 at 4/. per fathom; value 20/. per fathom. No. 2 stope at 3/. 10s. per fathom; value 10/. per fathom. A stope in roof of the 60 at 3/. 5s. per fathom; value 7/. per fathom. To drive in the end of ground and stope in the back of the 70 at 4/. per fathom; value 8/. per fathom. We are unable to drive the 60 forebreast owing to the water being in. Two masons are going on with the roofing for the engine. The framework for the chat mill is being put up, and the mill will be put in as soon as we can get it from the foundry.

SOUTH ROMAN GRAVELS.—J. W. Powning, May 30: The 45 east is driven about 4 fathoms; we expect no change in the lode in this direction until we have passed through the greenstone, which I calculate we shall do in about 6 fathoms further driving. The 45 west has undergone a very great change in the last 2 fms. driving; this end is entirely out of the greenstone, and is now good for progress. On Friday morning with a branch crossing the forebreast, and running into the north or footwall side of the level, out of which come a very strong feed of water, we have driven some 2 ft. into it, and by the sound there appears to be a cavity, consequently more lode still north of us. I put the men to drive towards it, and shall have it proved in the course of a day or two after the water is out; this end is driven 3 fms. 4 ft. from shaft. I hope to have the men at their respective places of work by Tuesday morning next.

SOUTH TOLCARNE.—Wm. Rich, Wm. Hambly, May 29: We have began to cross cut north at the 50 with the view to intersect the tin lode. Fraser's lode, in the back of the 50, carries a little tin. We hope to hole this rise to the bottom of the 40 in two or three weeks. We are driving a cross cut south at the trial shaft in the eastern part of the sett with the view to intersect South Condurrow great tin lode to the west of the cross-course. We are urging on the fixing of the flat-rods to the gossan shaft, with the limited force we have employed, as fast as possible.

TALYBONT.—T. Glanville, May 30: No. 1 Lode: The lode in the adit level has greatly improved during the past week, and is producing some good stones of lead ore.—No. 2 Lode: The winze below the 17 east is sunk 21 ft., and is worth about 10 cwts. of lead ore per fathom.—North and South Lode: The lode in the adit level is greatly improving, and I have no doubt that ere long we shall get into some good ore ground.

TANKERVILLE.—Arthur Waters, May 31: Watson's engine shaft is now 12 fms. below the 180, and we shall start to drive the 192 cross-cut south towards the main lode next week. We have every reason to calculate upon finding a rich course of ore at the said level. The 180 east is in a lode 7 ft. wide, worth 6 tons of lead ore per fm. The 180 west is worth 3 tons per fm., with every sign of a further improvement. According to the dip of the ore in the 140 and 150 our great bunch should still be in front of the present 180 end west. The winze in the 180, west of shaft, is in a strong lode, worth 4 tons per fathom. We expect a much better lode than 4 tons per fathom in this winze shortly. The 167 west, now about 19 fms. from shaft, is entering a new run of ore ground. In the 167, east of shaft, the men are driving a cross-cut north to prove the lode in that side of the level. Stopes yielding ore as for some time past. Our sampling next week will be 125 tons.

TOLGUS CONSOLS.—W. C. Vivian, May 30: I do not find to-day much varia-tion in the lode since my last report. The north branch seems to be getting a little larger, which is also the case with one of the other parts of the lode in the middle of the end. Taking all the branches, they make a width of 4 or 5 ft., and they have very little underlay, which is northward. The floor consists, to a great extent, of quartz; this we met some time since towards the back of the end, and we have found it sometimes, as at present, dipping, and at others rising. The only change to notice in connection with it is that the branches are now produc-ing rich copper ore. We are looking out for the machinery to work the old por-tion of the sett, and there is no doubt in my mind that we should open up a splendid property.

TREBEIGH CONSOLS.—John Gifford, May 30: The cross-cut, north of the 80 fm. level, is in 13 fms. 2 ft., and if the lode continues the same underlie as seen in the adit level we have about 7 feet more to drive to intersect it; the ground is still favourable for progress, and its character all that can be looked for for the production of silver-lead and blende ores, and the water issuing from the end freely and strong. The shaftmen are now busily engaged in fixing the plunger lift from the 30 to surface, which we hope to complete by the end of this week, so as to commence sinking again on Monday next.

TRELEIGH WOOD.—E. Hosking, W. Goldsworthy, May 31: The lode in the 34, west of the engine-shaft, is improving, and is worth 10/. per fathom. There is no change in any other of the bargains. Saturday next being setting day we will send you a full report.

VALE OF CONWAY.—J. Roberts, May 31: East and West Lode: The lead in the lode here has nearly all dropped to the bottom of the end; set to six men, at 12/. per fathom. On the Rabbit lode we are driving on the western part, as the eastern part was getting so near the surface we have left it for the time being; this part of the lode is improving as we are getting under the bunch of ore in the shallow cross cut. We are getting out some very fine lumps of solid lead; set again at 4/. per fathom. We have let the excavation for the wheel pit at 9/.

VAN CONSOLS.—James Roach, May 29: The 40, driving east of Gundry's, on north part of lode, consists of vein stones, carbonate of lime, and strong spots of lead, but not sufficient of the latter to value yet. When the present contract—20 fms.—shall be accomplished, I intend to cross-cut the full width of the lode standing south. We have begun cross cutting the lode east and west of Murray's shaft at the 50, but sufficient has not been done east of the shaft to allow me to speak of its character this week. The cross cuts west of shaft are in a lode con-sisting of very fine matrices, and yielding solid lead. All indications are in favour of our meeting with success in this direction. The winze sinking under the 40 west, on north part of lode, is without alteration since last reported. The stope in roof of the 40 is not quite so good.

VAUGHAN.—May 29: In the deep level, east of engine-shaft, the part of the lode carried is composed of a blue clay-slate, carbonate of lime containing branches of blende, and spots of copper and lead; our progress at this point is rather slow. In the 32 east, near the present end, we are cross-cutting south to reach under the winze sinking below the 20, in order to drain the same; also to prove the lode, which, from present appearance in the winze, should be found productive. In the winze sinking under the 20 the part of the lode carried has improved, now yield-ing 1¼ ton of lead ore per fathom, and from the further increase of water, we have put in three labourers more in order to prove this lode in depth, and if standing to the south side of the level under. At the surface the masons are progressing with the building of the smithy, and repairing the under framework of the draw ing machine, which we hope to complete erecting and put to work in a few days, after which we shall commence taking out the crusher and put it in order.

WEST ASSHETON.—John Craze, J. Manley, May 31: The 60, west of boundary, is now extended 62½ fms.; the lode in the present end is very strong and masterly, and is worth 7/. per fathom for lead ore; set to six men, at 6/. 17s. 6d. per fathom. No. 1 stope in back of ditto is worth 10/. per fathom; set to two men, at 4/. per fathom. No. 2 stope in back of ditto is worth 7/. per fathom; set to two men, at 3/. per fathom.—Tribute: Two men in back of the 40 west boundary at 7/. 10s. per fathom. Two men in back of the 50 west boundary not yet set, price offered is 5/. 2s. 6d. per ton. The parcel of lead and blende ores sold to Messrs. Neville, Druce, and Co., and Messrs. Kenrick and Son respectively, shall be shipped as early as possible.

WEST CHIVERTON.—R. Southey, Wm. Roberts, James Moyle, June 1: The sinking of Batters' engine shaft below the 160, is progressing satisfactorily, the lode is 3 ft. wide, and worth for lead 25/. per fathom. In the 160, west of shaft, the lode is 3 ft. wide, worth for lead 10/. per fathom. The lode in the 160, east of Batters' shaft, is 2½ ft. wide, worth for lead 8/. per fathom. In the 150, east of shaft, the lode is 2 ft. wide, producing good stones of lead. Improvement may here be shortly expected, as we are getting under a good branch of lead, driven through in the level below. The lode in the 150, east of shaft, on north lode, is 4 ft. wide, and worth for lead and blende 15/. per fathom. In the rise in back of the 140, east of Hawkes' shaft, the lode is 4 ft. wide, and worth for lead 15/. per fathom; the same will apply to the winze sinking below the 130, east of shaft, and coming down on this rise, which we hope to communicate with in the course of the present month, and when accomplished will lay open a valuable piece of ground for stoping, and ventilate the ends for extension eastward. The lode in the 120, west of Burgess' shaft, is 4 ft. wide, worth for lead and blende, 20/. per fathom. Other points of operation in the mine are without alteration worthy of remark. Last Friday we sampled 250 tons of blende, and yesterday 110 tons lead ores.

WEST COMB MARTIN.—John Treweek: I have to report a great improvement in this mine during the past fortnight. Thomas's lode presents a most promising aspect, and shows a larger quantity of silver-lead than we have seen before in any part of the property. We are pushing on this lode with all speed, fully assured from the rapidity improving aspects and rising ground that we shall shortly have lead in paying quantities. Vivington's lode is also showing larger quantities of mundic, with spots of rich silver lead. We shall send a fuller report next week.

WEST GODOLPHIN.—John Pope, May 29: Setting Report: Gunter Lode: The 70, driving north, by six men, at 7/. per fathom; lode 8 ft. wide, worth 20/. per fathom, producing tin. We shall carry only part of the lode at present, so as to make more speed in driving; as soon as these levels are driven about 6 ft. I shall have the shaft divided and cased, and put the shaftmen to sink, and have other men to drive. The 70, driving south, by six men, at 7/. per fathom; lode 9 ft. wide, worth 20/. per fathom for tin. The 60, driving north, by six men, at 5/. per fathom; lode 9 in. wide, producing low-price tinstuff.—Wilson's Lode: The 60, stoping back west, by six men, at 7/. per fathom; lode 8 ft. wide, worth 20/. per fm., producing tin. The 60, ditto by six men, at 3/. 10s. per fathomm; lode 4 ft. wide, worth 10/. per fathom, producing tin. The 60, stoping back east, by nine men, at 10/. per fathom; lode 14 ft. wide, worth 30/. per fathom; producing tin and copper. The 50, stoping bottom west, by six men, at 10/. per fathom; lode 14 ft. wide, worth 20/. per fathom, producing tin and copper. Ditto by nine men, at 7/. per fathom; lode 10 ft. wide, worth 20/. per fathom, producing tin and cop-per. Ditto by nine men, at 5/. 5s. per fm.; lode 9 ft wide, worth 15/. per fathom, producing tin and copper. Ditto by six men, at 3/. 10s. per fathom; lode 4 ft. wide, worth 10/. per fm., producing tin and copper. The 50, sinking Boulton's shaft, by six men, at 10/. per fm.; lode small. The 50, stoping bottom east, by six men, at 7/. per fm.; lode 7 ft. wide, worth 15/. per fathom, producing tin and cop-per. The 50, stoping back west, by four men, at 3/. 10s. per fathom; lode 4 ft. wide, worth 8/. per fathom, producing tin. The 50, stoping back west, by two men and two boys, at 2/. 5s. per fathom; lode 2 ft. 6 in. wide, worth 5/. per fathom, pro-ducing tin. The 50, stoping back east, by six men, at 6/. per fathom; lode 10 ft. wide, worth 18/. per fathom, producing tin and copper. The deep adit, driving west, by two men, at 4/. per fathom; lode 3 ft. 6 in. wide, worth 3/. per fathom, producing tin.—Pink Lode: The 50, driving west, by four men, at 10/. per fm.; lode small. The masons are progressing very well with the engine house, and I am expecting the cylinder of the new engine brought on the mine to-day, as it was in order for loading yesterday; the piston and piston rods, steam pipes, con-densing work, and gear work of the engine is on the mine. We are also getting on very well with enlarging Pressure shaft. I bought several lots of useful ma-terials at Great Vor sale yesterday at a reasonable price.

WEST MARIA AND FORTESCUE CONSOLS.—William Skewis, May 30: North Lode: The stopes in the bottom of the 71, west of Willesford's shaft, are worth on an average 15/. per fathom. The stopes in the back are worth 12/. per fathom. We have applied the boring machine to stoping in the bottom of the level, and find it works equally as well there as in driving.

WEST ROSKEAR.—S. Stephens, W. Bennetts, May 31: The lode in the 12, west of Stephen's shaft, has a much better appearance for copper than hitherto. The end is suspended for the present, and the men are rising in the back to com-municate with a winze that is sunk below the adit; when this is effected it will ventilate this part part of the mine, and enable us to commence stoping the back, when the lode will yield fully 4 tons of blende per fathom. We shall also resume driving west again, and judging from present indications, we fully expect soon to be in a good course of copper ore. The stope east of Lanyon's shaft is looking well, and will produce 4 tons of good quality copper ore per fathom. The tribute department is looking much as usual.

WEST TANKERVILLE.—Arthur Waters, May 31: The cross-cut at the 88, going south-west towards the lode, is driven 6 ft.; ground massive, slatey bed, of a congenial character. The 75 is driven south 20 fms., and is now holed to the winze from the 65; lode in present end is worth 1½ ton lead ore per fathom. Next week we shall commence stopeing north of winze, where the lode is worth 1½ ton per fathom, and south, where the lode is also worth 1½ ton per fathom. The 63 south is suspended for the time, and the men put to cross-cut east towards the big lode in that direction. No. 1 stope, in 63 south, is worth 1 ton per fathom. No. 2 stope, 1 ton per fathom. No. 3 stope, 1½ ton per fathom; and No. 4 stope, 1 ton per fathom. The stope in the 50 south is worth 1 ton per fathom.

WEST TRESAVEAN.—G. Stephens, May 29: We are pushing on as fast as possible with the end on the course of the lode and elvan east of the cross course at Michell's shaft; we are driving the level about 6 ft. wide, the end is driven 9 ft. from the cross-course, and I find the lode getting more settled and refined. There are two leading branches in the lode rich for tin, and the remainder of the lode for 6 ft. wide is good tinny work. There can be no doubt but that this is the great elvan course that has made so many of the rich deposits of mineral found in this neighbourhood, and we have every reason to believe that we are going to have a lasting tin property at this point of operation. The lode and elvan are running parallel with each other, and exactly between the two strata—that of granite and killas; wherever great and well-defined lodes have been found at such points as a rule great deposits of mineral are almost sure to be found. The lode west of the cross-course still continues good for tin, never better than just now. We are ex-tending west as fast as possible, and some splendid rocks of tin have been drawn to surface to-day from this point of operation.

WEST WHEAL TOLGUS.—May 31: Setting List: In Taylor's engine-shaft, sinking under the 135, the ground is the same as for some time past. In the 135 east the lode is 2 ft. wide, spotted with ore. In the 135 east the lode is 6 ft. wide, yielding 7 tons of ore per fathom. In the 125 west the lode is 2 ft. wide, yielding 2 tons of ore per fathom. In the 95 west the lode is 5 ft. wide, with a little ore, but not enough to value. The stope in back of the 135 west, east of No. 3 winze, is yielding 20 tons of ore; worth 140/. per fathom. The stope in back of the 135 west, east of No. 1 winze, is yielding 2 tons of ore; worth 12/. per fathom. The stope in back of the 135 west, east of No. 2 winze, is yielding 6 tons of ore; worth 40/. per fathom. The stoping side and back of the 135 west, east of No. 4 winze, is yielding 5 tons of ore; worth 35/. per fathom.—Richard's Engine-Shaft: The 95 driving east is in killas. The lode in the rise in the 85 west is 4 ft. wide, yielding 2½ tons of ore per fathom. In the 75 west the lode is small and poor. In the 65 west the lode is small and poor.

WHEAL CREBOR.—J. Andrews, May 29: The lode in the 120 east is 6 feet wide, worth 15/. per fathom. The lode in the stope in the back of the 120, west of winze, is 6 ft. wide, worth 10/. per fathom. The lode in the west stope in the back of the 108 is 5 ft. wide, worth 16/. per fathom. There is no other change, as ope-rations are being carried on by the side of the lode at all other points.

WHEAL GRENVILLE.—T. Hodge, May 28: Western Shaft: The lode in the 160 east end is worth about 8/. per fathom, and likely to improve. In the 150 east end the lode for the last few feet driving has been nipped up, but to-day we dis-covered a lode or branch in the south side, and judging from its appearance I ra-ther think it is the old tin lode; the lode looks promising to improve as we ex-tend. The rise in the back of the 140 east is producing low-price tinstone. The lode in the 130 east end is worth 8/. per fathom. The lode in the 130 west end if worth 7/. per fathom. North Shaft: The sinking of the said shaft below the 140 is going down fairly about 4 ft. below the level. The 130 east end is worth 8/. per fathom. The buildings and all othe surface work are going on satisfactorily.

—T. Hodge, May 30: We had to stop the engine yesterday about two hours, which caused the water to rise above the back of the 160, but at present the ma-chinery is working very well. The 150 end east is improving as we drive; I shall be able to say more about this end in a day or two. The 130 east end, at the north shaft, is looking better. The north shaft is going down fairly. No other change. The engine house is up to the first floor, and all other surface work is going on in a very satisfactory manner.

WHEAL KITTY (St. Agnes).—Stephen Davey, Richard Harris, May 26: We have no change to report in either of the bargains this week.

WHEAL NEWTON.—H. Bennett, May 31: The 40 end, east of Cook's, is not looking quite so well, but is still yielding good saving work for silver. No. 2 stope in the back of the 40 is still looking well, producing rich quality silver ore. The other points at this level are without any change. We have commenced to sink away below the 30, west of Cook's, on the silver lode; the lode is 1 ft. wide, yielding rich quality silver ore. We expect this and a branch of the Harrow-barrow lode will form a junction in the next 6 ft. sinking, where we have every reason to think we shall find some rich silver ore. This branch of the Harrow-barrow lode is 10 in. wide, very rich for arsenical mundic and copper ore. We have just intersected the silver lode in the 30 cross-cut, east of Cook's shaft, and hope to be able to say more about it in my next report, but so far as seen it has a very promising appearance. All the other points of operation are without any material change.

WHEAL RUSSELL.—J. Bray, May 31: There is no improvement to notice in our tutwork or tribute since my last report.

WHEAL UNY.—William Rich, Matthew Rogers, Joseph Rich, May 28: There is no great alteration in the lode in the bottom of Hind's shaft. The 160 west is improving; now worth 10/ per fathom. The 160 east is worth 6/. per fathom. We are clearing the 150 west. The rise in the 150 east is worth 7/. per fathom. The 140 east is worth 12/. per fathom. The 130 east is worth 7/. per fathom. The rise in the 60 west is worth 7/. per fathom.

THE VAN MINES—MONTHLY REPORT.

May 30.—As under I beg to hand you my monthly report upon this mine:—The 105, east of shaft, is driving in the bastard alongside the main lode, and is yielding good saving work. When we shall have driven this level a distance of 20 fms. east of shaft we shall put forth another cross-cut through the main lode to prove its width and value. The same level west of shaft is extended 54 fms.; the end as yet is poor for lead. We crossed south 15 ft. in the side of this level in search of the ore ground gone down in the bastard, below the 90, but found no-thing worth valuing. The 90 is extended west of shaft 70 fms., and is worth in present end 40/. per cubic fathom for lead ore. We have six men cutting plat for sinking a winze below this level, at a point 65 fms. west of shaft, for the purpose of ventilating the 105 west. The stripping of the lode to full width at the respec-tive points in the side of this level is worth on the average 28/. per cubic fathom. The stope in the back of this level is worth 20/. per cubic fathom; average width 6 fms. The 90, east of shaft, is worth for lead ore 20/. per cubic fathom. The stripping of the lode to full width in the side of this level is worth 16/. per cubic fathom for lead ore. The winze sinking below the 75 east is down 5 fms. We have put a shot or two into the hanging of the lode in the winze, and found good ore. As soon as this winze is communicated with the 90 we shall resume the driving of the 75 east with full dispatch.

The stripping of the lode to full width in the side of the 75 east is worth 26/. per cubic fathom for lead ore. The same in the side of the 75 west, at a point 135 fms. west of shaft, is worth 20/. per cubic fathom. The stopes in the back of this level (ten in number) are worth on the average 25/. per cubic fathom; average width of lode 17 ft. 6 in. The winze sinking below the 60, at a point about 80 fms. east of shaft, is down 3 fms. The 140 winze, below the 60 west, is communicated with the 75. The stopes in back of this level, east and west of shaft (ten in num-ber), are worth on the average 20/. per cubic fathom for lead ore; average width 15 ft. The stopes in the back of the 45, east and west of shaft, are worth 22/. 10s. per cubic fathom; mean width 16 ft. The permanent levels are pushed forward with usual regularity.—Surface: The construction of the new halvan floors is pro-gressing satisfactorily. The masons are getting on well with the buildings, and also the carpenters with the large shed. Our four-weekly sale takes place to-morrow upon 500 tons of lead ore and 150 tons of blende.—WM. WILLIAMS.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

FLINTSHIRE CONSOLIDATED LEAD MINING COMPANY (Limited).—Capital 45,000/., in 1/. shares. To purchase according to an agreement made be-tween T. P. James of the one part and James Thompson certain mineral properties in the parish of Mold, Flint. The subscribers are—John Thorrburn, Ditton Brook Ironworks, Ditton Widnes, iron merchant, 25; Richard Barker, Mold, mining engineer, 125; J. B. Cullahar, Southport, solicitor, 125; B. Wainwright, 21, Oxford-street, Liverpool, 125; F. F. Baker, Victoria Hotel, Southport, manager, 125; J. P. Deussen, Southport, wine merchant, 125; J. Thompson, Aspley Villa, Waterloo, Liverpool, 10. The directors are not yet appointed, but the qualification is fixed at 125 shares.

SAN JUAN REDUCTION COMPANY (Limited).—Capital 12,000/., in 10/. shares. For the purchase and subsequent reduction of the silver and gold bearing ores of Cement Creek district, San Juan county, Colorado. The subscribers (who take one share each) are—M. C. Vincent, 127, Strand, professor; L. Dow, 1, Princes-street, W., no occupation; W. Clark, 54, Lyndhurst-road, Peckham, gentleman; Thomas Waters, C.E., 54, Bishopsgate-street; J. H. E. Waters, 1, Park-row, Albert gate, mining engineer; E. Reed, 34, Finsbury-circus, steamship agent; H. O. Robinson, 34, Bishopsgate-street, engineer. This company is registered with-out articles.

TRAMWAYS AND GENERAL WORKS COMPANY (Limited).—Capital 100,000/., in 5/. shares. To carry on business as railway and tramway engineers, contractors, &c. The subscribers (who take one share each) are—James Marmont, 50, Pall Mall; E. V. Reich, Mayfield, Cheam; A. J. Lambert, 9, Craven Hill, W.; J. W. Maclure, Whalley Range, Manchester; W. Burchell, 8, Broad Sanctuary; W. G. Wilde, 349, Clapham-road; E. Green, 1, Queen's-place East, Hammersmith.

YORKSHIRE GLASS BOTTLE COMPANY (Limited).—Capital 50,000/., in 25/. shares. To carry on business as glass bottle manufacturers, at Whitwood Mere, York. The subscribers are—John Clase, The Hollies, near York, 8; C. E. H. C. Hedley, Lincoln's Inn, barrister; Percy Clase, King's College Hospital, 6; J. Rogers, Castleford, 12; H. S. Clase, Castleford, 6; John Clase, jun., York, 2; Albert Rogers, Castleford, 2.

LONDON COCOA FIBRE AND JUTE MANUFACTURING COMPANY (Limited).—Capital, 20,000/., in 5/. shares. To acquire and carry on jute works at Bow. The subscribers are—E. H. Heydermann, 22, Hart-lane, 50; C. J. Everett, St. Stephen's Chambers, 5; W. A. Constantine, 79, Park View-terrace, Manches-ter, 10; S. Clifford, Finborough-road, South Kensington, 5; H. T. Worrall, Bloom-field-road, Bow, 20; W. Arnold, 56, Coleman-street, 10; W. H. Jackson, Leeds, 10.

PATENT CHEF D'ŒUVRE SHOW TABLET COMPANY (Limited).—Capital 3,000/., in 5/. shares. To purchase the business of the Patent Chef d'Œuvre Show Tablet Company, of St. Brides-street, Ludgate Hill. The subscribers (who take one share each) are—R. Millburne, Stanmore Lodge, Tulse Hill; H. Leslie, Frederick's place, Old Jewry; F. J. Mellis, 196, Gray's Inn-road; E. S. T. Straith, 1, Frederick place; S. Chapman, 135, Fenchurch-street; E. M. Browne, Stafford-place, Buckingham Gate; Robert Keenan, 28, Holland-road North, Brixton.

CANADA HONDA GOLD WASHING COMPANY (Limited).—Capital 40,000/., in 1/. shares. To adopt an agreement made between Thomas Hiron, Robert Clarke, and Thomas Trueman Woods of the one part, and M. Walker on behalf of the company, for the purchase of the Bendego and "Buena Esperanza" claims at Canada Honda, St. Luis, Argentine Republic. The subscribers (who take one share each) are—H. St. John Wileman, Monmouth House, Richmond, no occupation; John Elliott, Vanbrugh Fields, Blackheath, no occupation; R. King, 22, Compton-terrace, Highbury, marine surveyor; E. Harvey, Weavers' Hall, E.C., accountant; F. A. Sande, 21, Langham-street, W.; J. H. Larner, 2, Richmond-place, Holloway, wine merchant; R. C. Nokes, Twickenham, gentle-man. The directors appointed are Messrs. H. St. John Wileman, and C. J. Hegan, the qualification being 200 shares.

JOSHUA WILLIAMS AND COMPANY (Limited.)—Capital 40,000/., in 400/. shares. To acquire the business of the firm of Joshua Williams and Co., tin and terne plate manufacturers, colliery proprietors, &c., of Aberdelais, Glamorgan. The subscribers (who take one share each) are—J. H. Rowlands, Tynod Vale, near Neath, engineer; W. Gilbertson, Pontardawe, Glamorgan, tin-plate manufacturer; Arthur Gilbertson, Pontardawe, tin-plate manufacturer; W. Ritson, Newcastle on-Tyne, contractor; W. A. Ritson, Newcastle, mining engineer; P. H. Rowlands, Accomb House, near York. The directors are not yet appointed.

CLEDDAU VALLEY SLATE QUARRIES COMPANY (Limited).—Capital 24,000/., in 5/. shares. To carry out an agreement for the purchase of slate quarries upon the farm of Llwyrebod, parish of Llandissilio, Carmarthen. The subscribers (who take one share each) are—W. C. Wallis, 8, Pulross road, Brixton, agent; F. Mason, 49, Peckham Grove, gentleman; R. G. Smith, 1, Royal Exchange, stock broker; R. Hills, 78, Coleman-street, agent; F. S. Sullivan, 1, York Rise, Highbury, clerk; W. S. Brunt, 45, Oldfield street, Stoke Newington, sharedealer; James Robinson, 12, Union court, Old Broad street, merchant. The directors are not yet appointed, but the qualification is fixed at 100/.

LONDON REAL PROPERTY COMPANY (Limited).—Capital 50,000/., in 10/. shares. To acquire property for building and other purposes. The subscribers (who take 50 shares each) are—N. Topp, Oakhill Park, Liverpool; W. Hartley, Waterloo Park, Liverpool; W. Jones, Church-road, Seaforth; B. Gibson, Waterloo Park, Liverpool; D. Radcliffe, Liverpool; D. Rolls, Waterloo, Liverpool; B. W. Rowson, Liverpool.

GUARDIAN HORSE AND VEHICLE ASSURANCE COMPANY (Limited).—Capital 50,000/., in 1/. shares. The object of this company is explained by its title. The subscribers are—J. F. C. Norman, Portsea place, W., 1; A. Pigot, 30, Hill street, Berkeley-square, 1; J. B. Spence, 31, Lombard street, 500; G. Pigot, Weybridge, 500; R. M. MacLean, Camden House, Blackheath, 500; G. Myers, 31, Lombard House, 250; F. G. Olliver, Arundel, Sussex.

CROMPTON AND EVANS' UNION BANK (Limited).—Capital 1,000,000/., in 20/. shares. To acquire the business of Messrs. Crompton, Newton, and Co., of Derby and Chesterfield, and that of Messrs. W. and S. Evans and Co., of Derby, bankers. The subscribers are—J. G. Crompton, Derby, 3572; G. Crompton, Chesterfield, 3572; C. E. Newton, Derby, 3572; John Barber, Derby, 1285; B. Lucas, Chesterfield, 1337; W. Evans, Derby, 1333; Henry Evans, Derby, 3999; John Evans, Derby, 1337.

GENERAL MEAT SUPPLY ASSOCIATION (Limited).—Capital 50,000/., in 1/. shares. To supply meat, fish, poultry, &c. The subscribers (who take one share each) are—H. W. Winn, 34, Ennismore Gardens; W. G. Godolphin Osborne, 4, Chichester-street, St. George's-square; Alfred North, Trefergan, Cardigan; S.

G. Grady, St. George's-square; W. M. North, 2, Plowden Buildings, Temple; George Lidwell, Templemore, Ireland; J. P. Clarke, 18, Springfield Villas, Kilburn.

KETTERING BRICK AND TILE COMPANY (Limited).—Capital 10,000*l.*, in 10*l.* shares. To manufacture bricks and tiles at Kettering. The subscribers (al of that town) are—G. Abbott, 80; T. Bire, 80; J. Newman, 80; C. Pollard, 80; F. Wells, 80; John Bellamy, 80; F. Walton, 80.

TO THE METAL TRADE.

FOR COPPER, TIN, LEAD, &c., apply to—
MESSRS. PELLY, BOYLE, AND CO.,
SWORN METAL BROKERS,
ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON.
(ESTABLISHED 1849.)

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JUNE 1, 1877.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde..	2 14 3-	—
,, Scotch, all No. 1 ...	2 15 6-	3 5 6
Bars, Welsh, f.o.b. Wales	5 12 6-	5 17 6
,, ,, in London.	6 5 0-	—
,, ,, Stafford., ,, .	7 15 0-	8 15 0
,, ,, in Tyne or Tees ...	6 0 0-	6 5 0
,, ,, Swedish, London ..	10 0 0-	10 10 0
Rails, Welsh, at works..	5 0 0-	5 5 0
Railway chairs	— —	—
,, spikes	— —	—
Sheets, Staff., in London	9 0 0-	—
Plates, ship., in London	7 10 0-	—
Hoops, Staff.	7 15 0-	8 15 0
Nail rods, Staff. in Lon.	7 10 0-	7 15 0
STEEL.		
English, spring	14 0 0-	23 0 0
,, cast	25 0 0-	45 0 0
Swedish, keg.....	16 0 0-	—
,, fag, ham.	17 10 0-	—
LEAD.		
English, pig, common .	21 0 0-	21 5 0
,, ,, L.B. nom.	21 5 0-	—
,, ,, W.B.	22 0 0-	—
,, sheet and bar..	22 0 0-	22 5 0
,, pipe.....	22 10 0-	—
,, red	23 5 0-	—
,, white	27 5 0-	28 0 0
,, patent shot ..	24 10 0-	—
Spanish.....	20 10 0	20 15 0
QUICKSILVER.		
Flasks of 75 lbs., ware.	7 5 0-	—
SPELTER.		
Silesian or Rhenish ..	20 0 0-	20 5 0
English, Swansea	22 10 0-	—
Sheet zinc	24 0 0-	25 0 0

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b ..	73 10 0	74 0 0
,, bars ,, ...	74 10 0-	75 0 0
,, refined.....	76 0 0-	—
Australian	68 5 0-	—
Banca	71 10 0-	72 0 0
Straits	69 0 0-	—
COPPER.		
Tough cake and ingot.	74 10 0-	75 10 0
Best selected	75 0 0-	77 0 0
Sheets and sheathing .	80 0 0-	—
Flat Bottoms	83 0 0-	84 0 0
Wallaroo	76 10 0-	77 0 0
Burra, or P.C.C.	74 10 0-	—
Other brands	74 0 0-	75 0 0
Chili bars, g.o.b.....	69 0 0-	—
PHOSPHOR BRONZE.		
Bearing metal	£112	0 0
Other alloys	£120 0 0-	140 0 0
BRASS.		
Wire	8d.	- —
Tubes.....	10	- —
Sheets	9	- —
Yel. met. sheath. & sheets.	7	- 7¼
Nails composition.....	8¼	- 9¾

TIN-PLATES.*	per box.	
Charcoal, 1st quality ...	1 2 6-	1 3 6
,, 2nd quality ...	1 1 0-	1 1 6
Coke, 1st quality	0 19 6-	—
,, 2nd quality	0 18 0-	—
Black .....per ton	16 0 0-	16 10 0
Canada, Staff. or Gla., at Liverpool	£12 0 0-	13 0 0
Black Taggers, 450 of 14 × 10	£30 0 0-	—

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—The present tone of our markets is not calculated to inspire confidence or impart strength, and a very different feeling must prevail before any favourable impression or change can be created. While political affairs remain in such an unsatisfactory condition buyers will most positively continue to limit their purchases to actual requirement, and avoid all unnecessary risks; and it will be next to an impossibility to disturb this fixed determination, especially as there is no appearance of amendment for a considerable time to come, and circumstances rather tend to create further restrictions of trade than otherwise. Whenever a calm and settled feeling of "do little or nothing" has set in it is not easily overcome, and although there may arise incidental occurrences from time to time to affect the current quotations, yet until the principal causes of depression are entirely removed there cannot be any material or permanent improvement. Of this there can be no doubt, and the trade must be prepared to endure a very quiet season, and if need be sellers should readily accede to lower prices, with the object of keeping business together, and preventing utter stagnation.

It is useless ever to attempt to run counter to a stream; that has been proved over and over again a ruinous game, and however anyone can still be found so foolish is truly marvellous, particularly when the course is so strong against them, and trade is so greatly contracted, and prices tend downwards. To attempt to disguise this fact is ridiculous, and all that may be said to the contrary will avail but little, and will only be reckoned as emanating from partial and interested sources. Opposition at such a time is vexatious, but futile, and delays greatly aggravate matters, as cheapness is an indispensable requisite not only for the preservation of trade now, but to accelerate its future re-usciitation, and we feel persuaded that the sooner the lowest level is reached the better, but that evidently is not yet, for it does not require a vast amount of discernment to perceive that our markets are still unsound and surrounded with innumerable dangers, and consequently no effort should be spared in getting them into a safer position immediately, that they may be rendered less subject to sudden or violent commotions. Holders, unfortunately, are too much influenced by the prices they have given for metals, especially copper and tin, and not sufficiently guided by the necessities of the times, and thus they are led to hold when they ought to realise, to their own injury and to the great inconvenience of the trade. It is always better to cut a loss and be free to come in again at a more opportune moment than to be continuously hampered up with old stock, and become an obstacle to trade and a public nuisance.

COPPER.—The state of this market is peculiar and somewhat uncertain and perplexing. The stock is abundant, and there is no apprehension that supplies will not be fully equal to the demand; but although there is plenty of copper it is not very freely offered, and the largest holders still seem disinclined to part with it, and appear fully resolved to hold on at all risks for some time longer, and try whether better prices cannot be obtained. The withholding of a large quantity from the market naturally causes much inconvenience to buyers, and is a great impediment to business, and smelters are often compelled to decline orders for manufactured simply because they cannot meet with raw material at suitable prices; it, therefore very seriously operates against smelters as well as merchants, and must continue to do so amongst the Indian houses, for orders for sheets are more likely to be reduced owing to the continuous drop in the rate of Exchange, and the improbability of any material recovery; this is unfortunate, for of course trade is quite limited enough without having additional obstructions put in the way, and preventing that being done which could and might be accomplished if holders were more accommodating in their disposition, and do at once what they will doubtless ultimately have to yield to, and in their own interest should by no means be deferred.

It is very clear that if holders of Chili will not sell the quantity of copper manufactured will be diminished, and, therefore, as long as the Chili produce is retained in first hands, the stock, instead of getting smaller, will be growing larger, and this is the actual state of things at the present time, according to the returns just issued. Now, in the face of heavy stocks, far beyond what is wanted, and these stocks proved to be accumulating and consumption considerably diminished in consequence of the action of holders, how is it possible for any improvement to take place in the statistical position of this metal; and if its statistical position is daily becoming worse instead of better, how, then, can higher rates be expected? Holders, in fact, by keeping aloof from the market are enemies to their own interests, and with consumption decreasing and stocks increasing, they will most assuredly have to pay dearly for their experience. We strongly advise them to realise, because there is nothing to compensate them for holding, but, on the contrary, by holding back they will add to the cost of having to sell in a lower market, and we trust importers will endeavour to remedy the present little difficulty there exists in meeting with Chili bars at such rates as will enable the smelters to dispose of large quantities of manufactured, and thereby give permanent relief to our market, otherwise orders will be cancelled, and perhaps only repeated at lower limits, for there is no occasion for buyers to hurry forward in effecting contracts. They can afford to with advantage, but much valuable time is being lost by monopolising stocks, and it is quite time this was put an end to, as holders have thoroughly tested the market already, and have failed to obtain an advance.

IRON.—As yet there is no evidence of any better demand, and this week has proved as cheerless as many previous ones, but disappointing as the present state of trade is, the future presents no brighter prospects, and sellers begin to despair of doing any good for a considerable time to come. The Indian Exchange is falling, and the markets are giving way. By the last mail from Calcutta they report a very quiet week in metals, and the disparity between the offered rates and home prices has rendered business to a great extent impracticable. In Bombay iron is stated to barely maintain its value, and so difficult has it become to make sales in that market that merchants now decline to telegraph out offers at any reasonable market rates. The advices from Kurrachee are in sympathy with the depressed tone of the Bombay market, and business there continues in the same unsatisfactory state as reported in the other Indian markets. From New York the Scotch pig market is reported quiet, and the demand for American pig is also quiet, and prices irregular. Rails have been selling more freely, but at lower prices. Scrap is without change, and manufactured dull and unchanged. The accounts received from the various iron districts in England are, on the whole, most unsatisfactory. In Middlesborough the market is neglected, and there is scarcely any disposition to operate; sellers are not unwilling to submit to a slight reduction in order to promote business; plates and angle makers are fairly in work. From Rotherham it is stated that prospects are in no way more encouraging than was the case a few weeks ago, and employment will be difficult to obtain. In South Durham the iron trade is comparatively inactive, and there is an innate dulness in trade at the present time, and various elements of uncertainty. The Sheffield advices are less unfavourable than they have been, and some few branches of industry are becoming active. The local rail mills are employed upon Russian orders, and there is, consequently, more demand for Bessemer steel. The cast-steel trade is, however, very dull. There is no improvement at Leeds, and the trade is said to be in the same unsatisfactory condition in which it has been for some time past. There is nothing of any importance to report from Lincolnshire; there are but few orders received, and very little turned out. Barrow-in-Furness appears to be quite an exception to the general rule, as the makers of iron are said to be in a much better position than they were even at the beginning of the year. The produce from the furnaces is all disposed of, and makers have orders in hand which will consume the output for some weeks. Wolverhampton is also improving in the galvanising trade. In Scotch pigs there is a quiet but tolerably steady market. The weekly shipments for the last five years are as follows:—

1877	1876	1875	1874	1873
178,113	179,685	216,570	173,237	272,904 tons

And the shipments for the—

Week ending May 27, 1876 ..... Tons	10,696
Week ending May 26, 1877	10,566
Decrease	130
Total decrease for 1877	1,798

Imports of Middlesborough pig-iron into Grangemouth:—

Week ending May 26, 1877 ..... Tons	4,822
Week ending May 27, 1876	4,750
Increase	72
Total increase for 1877	26,405

LEAD.—Nothing has occurred in this metal requiring any particular comment. The market is dull, and prices easy; Spanish quoted 20*l.* 10s. The price of "Stalberg" in Rotterdam has been reduced to 123*f*l.

SPELTER.—The market is slightly lower, Silesian being now quoted down to 20*l.*

QUICKSILVER.—The market remains quoted as before.

TIN.—The event of the week has been the Dutch sale of Banca, consisting of 23,400 slabs, which realised 42 fl., and averaging 72*l.* to 72*l.* 10s. London. Previously to the sale coming off the market in Holland was dull, and Banca was offered for delivery ex store at 43 fl., and ex sale at 42⅜ fl. Billiton 42 fl., and forward 41⅜ fl. Our market has been dull all the week, and prices tending for the most part slightly in buyers' favour. The deliveries of tin during the last month were very satisfactory, but the arrivals have also been large, and the stock has again increased, there being now 17,367 tons, against 16,511 tons on April 30 last. This is a turn in the wrong direction; and, of course, will not help to strengthen the market. By the last mail from Australia we hear from Sydney that the tin market was very flat at declining rates, buyers not being disposed to operate with any freedom in view of the unsettled state of the European markets; and from New York on the 19th ult. the market was reported to be in the same stagnant state before noticed, and prices to a great extent nominal; yet in the face of these reports large shipments have been made from here to America, but it seems very questionable whether they will meet with any better market than our own.

THE IRON TRADE—(Griffiths's Weekly Report).—Friday Evening.—The closing price of warrants for g.m.b. pig-iron on the Glasgow Exchange this afternoon is 54s., a reduction in price since last week of 3d. per ton. The following current quotations for makers' No. 1 iron exhibit reductions varying from 3s. to 6d. per ton since our last quotations. The fall in price is more noticeable in the highest brands:—Gartsherrie, 62s.; Coltness, 67s.; Calder, 61s.; Langloan, 63s; Summerlee, 59s. 6d.; Monkland, 55s. 6d. f.o.b. Glasgow; Glengarnock, 59s. 6d.; Eglington, 55s. f.o.b. Ardrossan; Shotts, 60s. f.o.b. Leith; Kenniel, 58s. f.o.b. Bo'ness. The depressed state of the iron trade remains a subject for grave consideration in all parts of the country, and affords pre-occupation for our most able fiscal and commercial thinkers. Nevertheless strikes and lock outs are rife on the Clyde and other parts of Scotland, in Northumbealand, Northamptonshire, Durham, Lancashire and Yorkshire, and other districts. This is a strange anomaly. It is most regrettable that the advisers of the men should be so infatuated as to lead the workmen into this unhappy delusion, which will only make matters worse. Our market this week is quiet in every department. In the finished iron trade bars and hoops are unchanged, with a flagging demand. Best boiler-plates still move but slowly. Girder iron is in demand, but the Belgians take the whole of this trade.

We have had a fair business this week in ship plates, but the whole of these orders are now taken by the works on the Tees, and we have reason to state that some of the Middlesborough manufacturers are fairly off for orders for angles and ship-plates. In this department the trade looks no worse in this district. The best boiler-plate makers in Staffordshire and Shropshire have reason to complain of the slackness of trade. Kirkstall Forge, with their numerous specialties, are active, but Lowmoor, Bowling, and other eminent Yorkshire houses find their order books attenuating through the complications now raging in the East of Europe. The Cleveland ironmasters are pre-occupied in propounding measures to effect an equilibrium between the supply and demand of the raw material. Arrangements will immediately be made either to blow out furnaces or anticipate the over production by a temporary market, which will relieve the smelters from the slightest necessity to plunge their iron into a weak and falling market. No incident of importance occurred in regard to the trade at any of the great provincial Exchanges. Regret and sympathy were universally expressed on the Birmingham Exchange at the death of Mr. Henry Williams, well known and respected in the Black Country.

In the MINING SHARE MARKET the dealers have been chiefly occupied in the settlement of the fortnightly account, and there is no particular change to notice. Business continues dull, and prices for the most part are merely nominal.

The mines actually dealt in have embraced Tankerville, Parys Mountain, Rookhope, Derwent, Glenroy, North Laxey, Van, East Van, Leadhills, Devon Great Consols, and a few others.

Among TIN MINES Tincrofts are quoted 16 to 17, and at the meeting, on Thursday, a dividend of 5s. per share (1500*l.*) was declared, leaving a balance in hand of 15*l.* The accounts showed a profit on the quarter of 1460*l.* The tin sold realised 9356*l.* The costs charged were 8263*l.* Carn Brea, 35 to 37; at the meeting here a loss was shown on the quarter of 176*l.*, and a debit balance on the face of the accounts as presented of 2177*l.* The tin sold realised 10,923*l.* Costs charged, 11,764*l.* The manager stated at the meeting that the mines of Tincroft and Carn Brea had sold nearly 500 tons of tin in the quarter, so that a rise of even 10*l.* per ton would have made a difference of 5000*l.* to them. He also added that the production of Cornwall had fallen off from 1600 to 1000 tons per month, and that in Australia, notwithstanding the richness of their produce, not a single company was dividing any profit. Levant showed a loss on four months of 1611*l.*, and a debit balance of 906*l.*; a good deal of extra work has been done. The tin sold realised 3376*l.*; copper, 965*l.*; costs charged to April, 4503*l.* West Godolphin, 2 to 3; this mine is looking well, and the various points in operation valued in the aggregate at 214*l.* per fathom. The bottom level (the 70) is worth 70*l.* per fathom in each end. Cook's Kitchen, 2⅞ to 3; Dolcoath, 32 to 34; East Pool, 9 to 10; South Condurrow, 8¼ to 8½; South Crofty, 10 to 11; Wheal Agar, 3¼ to 3⅜; Wheal Grenville, 1⅛ to 1½; Wheal Kitty (St. Agnes), 2 to 2½. South Carn Brea, upon which heavy calls have been made for some years past, is to be wound-up and the materials sold.

In COPPER MINES Devon Great Consols are quoted 5 to 5½; at the meeting (particulars of which will be found in another column) the accounts, an abstract of which we gave last week, were submitted and passed. A dividend of 5s. will be declared at the end of the current month or beginning of July. Hingston Down, ⅜ to ½; Marke Valley, 20s. to 22s. 6d.; Penstruthal, 9s. to 11s.; West Seton, 30 to 32½; West Tolgus, 60 to 62; Wheal Crebor, 1½ to 2½. Parys Mountain, 7s. to 9s.; the setting for the month shows points in operation worth in the aggregate 33 tons of copper ore and 9 tons of sulphur per fathom; besides which, 12 pitches have been set. Tolgus Consols, 5 to 5¼.

Among LEAD MINES Roman Gravels and Tankerville have been flat; the former leave off 10½ to 11, ex div. The 106, south of flat-rod shaft, is worth 1 ton of lead ore per fathom; the 106 north ½ ton per fathom; the winze in the 95 south 1 ton. The stopes, winzes, and different points in operation are worth in the aggregate 124 tons per fm. The ends in the mine are worth 5 tons per fathom in the aggregate: 50 tons of blende will be sold on Friday. Lisburne, 75 to 80; on Tuesday a dividend of 400*l.* (1*l.* per share) was declared, and paid on the following day. Tankerville declined to 6, but leave off better, at 6½ to 7. The 180 east is in a lode 7 ft. wide, and worth 6 tons per fathom; the 180 west, 3 tons; the winze at the 180 west, 4 tons. The 167 west is entering a new run of ore ground. The sampling next week will be 125 tons for the month.

West Tankerville, 17s. 6d. to 20s.; a clerical error occurred in our last—the sale of lead and blende realised 576*l.* 2s. 6d., instead of 376*l.* 2s. 6d. as printed. Great Laxey, 20 to 21. North Laxey, 14s. to 16s.; a decided improvement has taken place in the shaft, where the lode is yielding good saving stuff, and with every appearance, the agent writes, of being in a good lode. Glenroy, 17s. 6d. to 22s. 6d.; the lode in the shaft is 6 to 7 ft. wide. Pateley Bridge, 2 to 2½; the Rake vein in the 30 east has again improved, and is worth 1½ ton of lead per fathom, and the agent writes that he is convinced the level is entering the tail end of the great deposit gone down below the 20.

Aberdaunant, ⅝ to ¾; Glyn, 1⅜ to 1⅝; Great Dyliffe, 3 to 4; Derwent, 2¾ to 3¼; Leadhills, 5¼ to 6; Ladywell, 17s. 6d. to 22s. 6d.; Pennerley, ⅜ to ½; East Craven Moor, 10 to 10½. Gorsedd and Merllyn, 5 to 6; this mine is steadily improving; the lode is worth from 60*l.* to 100*l.* per fathom. In reference to the sampling of 50 tons, referred to in our last, it should have been "next month," not "week." Pennant, 5¼ to 6; the 80, driving east, is approaching an important point. Rookhope, 17s. 6d. to 20s., and in good demand; St. Patrick, 1⅛ to 1⅜; Van, 33 to 35; Van Consols, 1¼ to 2; West Chiverton, 13 to 15; West Craven Moor, 11 to 12; Bodicia, 1⅜ to 1¼; Grogwinion, 3½ to 4½; Red Rock, 2 to 2½; Sandwith, 3½ to 4; St. Harmon, 3¼ to 3⅜; Wye Valley, 3¼ to 3⅜; West Wye Valley, 3⅜ to 3⅝; West Goginan, ¼ to ⅜. The lode in Mowydd Gorddu, we understand, continues worth 40*l.* per fathom.

FOREIGN MINES.—Argentine, 4¼ to 4⅜; Blue Tent 3 to 3½; Condor of Chili, 4 to 4½; Cedar Creek, ⅜ to ½; Chontales, 6s. to 8s.; Eberhardt and Aurora, 7 to 7½; Flagstaff 2½ to 2⅝; Frontino and Bolivia, 2⅛ to 2⅜; New Zealand Kapanga, 1⅝ to 2; Last Chance, 8s. 9d. to 11s. 3d.; New Quebrada, 2 to 2½; Port Phillip, ⅜ to ½; Richmond, 6½ to 7.

The Market for Mine Shares on the Stock Exchange during the week has been fairly firm, considering the various causes tending to restrict business. The fortnightly settlement, concluded on Thursday, passed off without any unpleasant feature, although during the adjustment of the "accounts" some fears were entertained that inconvenience might arise by the results of defaulters in other departments. As soon as the "account" had been satisfactorily completed a considerable stimulus was given to quotations by heavy purchases, especially low-priced home lead mines, and the general tendency was encouraging. The Cambrian Company is stated to be progressing satisfactorily with the raising of the capital required for the development of the property, so that it is confidently anticipated that the mines will be in full operation, and the necessary stores of material, &c., got up to the mines during the coming summer. With adequate supplies there need, with the excellent barrack accommodation, be no stoppage during the entire winter, upon however large a scale the works may be carried on.

New Zealand Kapanga, 1½ to 2; the advices received by mail this week continue satisfactory. The underground operations were being pushed on with vigour. The reports received as to New Zealand gold mining generally are encouraging. The get of the gold-procuring mines was 32 000*l.* worth during March. The Paeroa Company have got gold at 450 ft. deep, and near the Mountain slide the Kuranui Company had got it at 650 ft. They had paid off overdraft on bankers, 6000*l.*; paid 53,940*l.* as dividends to the shareholders; and added 4000*l.* to the reserve fund. There are 13,484 shares, and the shareholders received 4*l.* 10s. per share as dividend in little more than three weeks. When the New Zealand Kapanga reaches a similarly prosperous position the shareholders will have good cause to congratulate themselves.

St. John del Rey, 300 to 320; the last telegram received, dated Morro Velho, May 24, states the produce for the second division of May, 12 days, was 14,250 ozs., of the value of 552*l.*, the ley of the ore being 7·8 ozs. per ton. The general work was going on well, and satisfactory progress was being made. Don Pedro, 4½ to 4⅝; a telegram from Rio gives the result of the clean up for the first division of May at 1900 ozs. Argentine, 4¼ to 4⅜; the detailed report of Mr. Oxland is expected in the course of a few days. The mine is said to be opening up satisfactorily. Condes, 4 to 4½; the reports and telegram from the mine are said to be satisfactory as to the value of the mine.

Richmond, 6½ to 7; the usual weekly telegram states that the refinery has produced doré bars to the value of $8000, and is closed. The discovery is looking well, and is up 70 ft. No report from the manager has arrived this week. As the refinery has worked up the stock in hand, and the smelting has not yet been resumed, the refinery of necessity is closed. The effect of the interim injunction in force being to shut the company out from access to the richly leaded ores proved to exist in the disputed ground, and it being proved that without the proper fluxing ores it will not pay to attempt smelting, but the westerly discovery of good carbonate ore now, by the last telegram, stated to be proved upwards from the 500 level to the extent of 70 ft., offers a speedy solution of the smelting difficulty, by providing the leaded ores so essential to profitable smelting. The inhabitants of the town of Eureka are suffering severely by the suspension of operations, numbers of miners have left, and trade of all kinds is at a standstill, and for all this the Richmond Company consider they have to thank the Eureka Consolidated Company, as but for the course taken by them the season was fuller of promise than at any former period. Whatever the injury inflicted on the Richmond Company the owners of mining property in America who contemplate marketing it in this country may rest assured that the practical loss to them will be fourfold greater. However good and promising may be the mines now offered, their promoters are met with the rejoinder that there is no proper protection in America against attacks, legal or illegal on English companies, and that the greater their success the more unscrupulous and virulent are the attacks made on them.

Eberhardt and Aurora, 7 to 7½; the latest advices say that the tunnel and incline are progressing favourably. The incline had reached a depth of over 1200 ft., and in a formation that ore may be looked for any day. Exchequerf ½ to ¾; the advices from this mine are considered satisfactory, and the manager appears to think the prospects at the mill more encouraging, and anticipates that the recent inspection will result in a reassuring report. The 100 ft. level had alone yielded 100 car-loads of ore. The mining captain in charge, formerly employed at the Comstock Mines, is described as a practical silver miner of considerable experience. I. X. L., ⅜ to ½; driving had been discontinued at the 200 ft. level, in order to crosscut towards the adit level, so rich in the adit, and it is anticipated it will at this depth be cut relatively richer. All the indications in the cross-cut are described as very favourable, and in a week or two more definite intelligence should be received. The mill chimney was about completed, and the O'Hara furnace would be commenced provided the professional inspectors recommended it.

Flagstaff, 2½ to 2⅝; this is now stated to be the heaviest producing mine in Cottonwood. Advices state that the mine is now worked in the interest of English shareholders, and that English capital has had its confidence restored to some extent by the virtue of American Courts of Law and the value of Utah mines. The Flagstaff Mine is now being worked under the immediate supervision of Mr. Moses Hirschmann, and under the general management of Mr. Andrew Hunter: 110 men are employed in the mine, and the average daily produce is 50 tons of ore, taken from the 600 ft. level. The work of prospecting is being pushed ahead vigorously, and it is said that sufficient quantities of ore are kept in reserve to make the shipment uniform and continuous. There is a little water in the mine, but it is easily managed. It is proposed to extend the tramway to the line of the Wasatch and Jordan Valley tramway, as soon as the weather permits, and remove the engine and ore-house nearly down to Alta.

Emma, according to the lateat advices, is watched over to some extent by mining men in Utah, and that its merits are never called in question, as it is the universal opinion of all who know the mine that it is one of the best pieces of property in Utah. Mr. Moses Hirschmann, the superintendent of the Flagstaff, went through the workings of the Emma a short time since, and he says it is not nearly in so bad a condition as has been represented. The caves, while they are quite extensive, have not run to the surface, and there is very little water in the workings, which are partially drained by the Bay City Tunnel. For $30,000 and in 60 days (Mr. Hirschmann says) the mine can be put on its feet again and ore shipments commenced. The same correspondent adds, "As Park has won the suit in the New York Courts with the Britishers work will be started up about June 1. Both Mr. Geo. Cullens, formerly superintendent of the Flagstaff, and Prof. Clayton are spoken of as superintendent."

The Market for Hydraulic or Gold Washing Mine shares has been quiet, and prices are unchanged, though the small amount of business transacted makes them almost nominal. The information received from California makes it appear likely that the water season will last longer than was anticipated. Blue Tent, 3 to 3½; the aqueduct was, at date of last advices, bringing in a good supply of water, and enabling the superintendent to steadily continue washing. A telegram received during the week announced a further partial clean-up of $3300, making a total of $13,900 advised since May 11. Cedar Creek, ⅜ to ½; washing has been carried on at Baker claim with all available water, and preparations were under weight for another big blast.

Lead Mines have been a good market, and quotations comparatively firmer. Van, 33 to 35; the usual monthly report appears in another column. There is no particular change to notice. The sale on Thursday—500 tons lead and 150 tons blende—realised 7760*l.* Grogwinion, 3½ to 4½; the monthly sale of 100 tons of lead on Tuesday realised 13*l.* 7s. per ton; mine looking well at all points. Wye Valley, 3¼ to 3⅜; the prospects of this mine in the lower levels

ware, it is said, so improved, that sales of ore, after a stoppage of three or four months, are about to be resumed. The sinking of the shafts is making good progress, and the result so far is satisfactory. The lode in the 22 continues to open out well, and a winze sinking below the 10, some fathoms ahead of the end of the 22, in order to prove the ore ground, is going down in a productive lode. West Wye Valley, 3⅜ to 3⅝ ex. div.; the lode in Brooke's shaft, continues very rich, and is said to be the best point yet seen in the mine. The other points of productiveness keep up their usual standard, and will turn out a large quantity of ore for the crusher when the machinery is completed. The mine is opening out satisfactorily. South Cwmystwith, 3½ to 4; the opening out of ore ground is progressing well, and a large parcel of rich lead is accumulating. The machinery is making fair progress. St. Harmon, 3¼ to 3⅜; the annual meeting will be held during the current month, when a satisfactory report is expected to be made. The mine continues to improve at the various points of development, and the cutting of the south lode may be shortly expected. This event is looked forward to with much interest by the executive. Red Rock, 2 to 2½; operations are going on well at all points, and good deposits of ore being opened up. Pennerley, ½ to ⅝; the water is rapidly lessening, both in the Red Mine and at Potter's Pit.

Pateley Bridge, 2 to 2¼; the Rake vein, in the 30 east, has much improved during the week, now 6 ft. wide, and carrying a rib of solid metal worth 1½ ton per fathom. The agent is of opinion that he has now fairly entered the tail end of the great deposit of lead ore gone done in the 20. The Rake vein, in the 30 west, is worth 1 ton per fathom. Fielding's vein is looking better, and has improved, now producing over 1 ton per fathom. Sun vein without change, worth 1¼ ton per fathom. On the whole, the mine is looking much better. West Pateley Bridge, 1¼ to 1½; the different points of operation fully maintain their value, and an improvement is reported to have taken place in the Craven Cross vein.

Subjoined are the closing quotations:—

Ashton, 1½ to 2; Carn Brea, 35 to 37; Devon Great Consols, 5 to 5¼; Dolcoath, 34 to 36; East Caradon, ⅝ to ⅞; East Lovell, 1 to 1½; East Van, 4½ to 5; Glyn, 1¼ to 1¼; Great West Van, ¼ to ½; Great Laxey, 20 to 21; Hingston Down Consols, ⅛ to ⅜; Leadhills, 5½ to 6; Marke Valley, ⅞ to 1⅛; Parys Mountain, ¼ to ½; Pateley Bridge, 2 to 2¼; Pennerley, ¼ to ½; Pentreath, ¼ to ½; Roman Gravels, 11½ to 12; Tankerville, 6½ to 7; Tincroft, 15 to 18; Van, 33 to 35; Van Consols, 1⅝ to 1⅞; West Assheton, ¾ to 1; West Basset, 3 to 4; West Chiverton, 13 to 15; West Tankerville, ¾ to 1; West Pateley Bridge, 1¼ to 1½; Wheal Crebor, 2 to 2⅝; Wheal Grenville, 1 to 1¼; Almeda and Tirito, ⅛ to ⅜; Argentine, 4¼ to 4¾; Birdseye Creek, ⅜ to ⅞; Blue Tent, 3 to 3¼; Cape Copper, 3¼ to 3⅜; Cedar Creek, ⅜ to ⅝; Chontales, ½ to ¾; Colorado Terrible, 1¼ to 1¾; Condes of Chili, 4 to 4½; Don Pedro, ½ to ½; Eberhardt and Aurora, 7 to 7½; Emma, 1-16th to 3-16ths; Exchequer, ⅛ to ⅜; I. X. L., ⅝ to ⅞; Flagstaff, 2⅛ to 2⅛; Frontino and Bolivia, 2¼ to 2½; Javali, ¼ to ⅜; New Zealand Kapanga, 1¼ to 1¾; Malpaso, ½ to ⅝; Malabar, ⅛ to ¼; New Pacific, ⅛ to ¼; New Quebrada, 2⅛ to 2⅜; Pesarena, ⅛ to ¼; Rica, ⅛ to ¼; Richmond Consolidated, 6½ to 7; St. John del Rey, 310 to 330; San Pedro, ⅜ to ⅝; Sierra Buttes, 1½ to 2; South Aurora, ⅛ to ¼; Tecoma, ⅛ to ⅜; United Mexican, 1¾ to 2¾; Last Chance, ⅛ to ⅛; Pluma Eureka, 2½ to 3; Oregon Preference, 4 to 4¾.

COLLIERIES.—The business of the past week in this class of shares shows little, if any, reaction on the dulness of the previous one, and whatever changes have taken place have as a rule been of a downward nature, though this has been caused more by absence of buying orders than by any intrinsic difference in the value of the shares. In the coal and iron districts, however, there is a better prospect for trade than for some weeks past, and, as a rule, if no increase in prices is noticeable, at least greater firmness may be remarked. The strike in Northumberland, which, however, can hardly last for any time, will no doubt have the effect of stiffening the price of coal in Durham and Yorkshire. In Lancashire a slight rise in the price of coal is noticeable, while for slack considerably better rates are obtainable, some collieries realising as much as 1s. 6d. per ton more than they could obtain three months ago. In Derbyshire there is plenty of demand for iron, and, considering the time of the year, the quantity of coal raised and sent to London and elsewhere is more than satisfactory. In South Wales, also, a better tone is experienced in both the coal and iron trades. In fact, as a whole, these two industries have now better prospects than for a long time past. With anything like a settlement of the Eastern Question, and something like a probability of a lasting peace, all trades would at once speedily advance, while few would in prosperity outrun that connected with coal and iron.

Altami shares close at 4½ to 5; the Brassey coal was reached on Saturday last. Mold Argoed, 2½ to 3; a good output is easily maintained at this colliery, which is now doing a better trade than for some time past. Llay Hall, 9 to 9½. Chapel House shares have receded, and close at 2½ to 3. The colliery, however, is working more satisfactorily than ever, the output for last month having been 6700 tons, which is considerably in advance of the average rate. Some splendid contracts have lately been made, and not only is a very large portion of the output now under contract for some months hence, but the demand carries off all the company can possibly raise, and is rapidly increasing. The Park Mine seam is proving splendidly, and the coal raised is of magnificent quality. The new 15 ft. pit is now down 213 yards, having been sunk 3½ yards during the week. An advance of 1s. 6d. per ton upon the prices of three months ago is now being obtained for slack, and trade generally is very good. Cakemores close at 2¼ to 2¾. Bison and Crump Meadow, West Mostyn pref., and Newport Abercarn shares seem to have died out of the market, neither one of the three having met with enquiry. New Shariston have receded to 2¾, 3¼, but Thorp's Gawber remain firm at 1½ to 2. Cardiff and Swansea shares also close at 1½ to 2.

At Redruth Ticketing, on Thursday, 1368 tons of copper ore were sold, realising 6354*l.* 15s. 6d. The particulars of the sale were—Average standard, 99⅞. 8s.; average produce, 7½; average price per ton, 4*l.* 13s.; quantity of fine copper, 101 tons 16 cwts. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
May 3.	1721	£100 3 0	7¼	£4 9 6	12s. 5d.	£62 1 0
„ 17.	31 6	99 15 0	7¼	4 10 6	12 5	62 0 6
„ 31.	1368	99 8 0	7½	4 13 0	12 6	62 8 6

Compared with the last sale, the decline has been in the standard 1*l.* 8s., and in the price per ton of ore about 2s. 2d.

LEAD SMELTERS, AND LEAD MINES.—Owing to the recent failures of two lead smelting establishments, and looking at the various interests involved, it is not surprising to find that the directors of the various lead mines (urged on by the shareholders), and more especially those mining companies selling large quantities of lead ores monthly, should come to some clear and definite understanding with the leading lead smelting firms, so that for the future either cash payments (most preferable) should be made, or a 30 days' approved bill, instead of, as heretofore, a three months' acceptance. We feel sure that such an arrangement as this ought to be most satisfactory, and mutually agreed to by both the lead mining companies and the smelters. The tin smelters pay cash on delivery, and why cannot this be done by the lead smelters when the lead ore is delivered either into trucks at the nearest railway station to the mines, or free on board ship? If the lead smelters will adopt this improved system, and so tender for the future, it would prove a great boon, we feel sure, to all the lead mining companies.

WEST ROSKEAR.—This mine, under the new proprietor-hip and management, is making very satisfactory progress. In the 12 east there is a fine lode, worth 4 tons of good quality copper ore per fathom; and in the same level west the indications are such as to warrant the belief that a good course of ore copper ore will shortly be met with. The lode in the 12 west will also yield fully 4 tons of blende per fathom, and a parcel of that ore will be got ready for market as soon as possible, and a sampling of copper ore will take place in about a month. There are 19 men working on tribute, some of whom are breaking lead ore of excellent quality. A parcel of the ore was recently sold at 21*l.* 3s. per ton, and a further quantity will shortly be ready for sale.

MINING IN THE ISLE OF MAN.—Under the title of the BELL ABBEY and FALCONCLIFFE MINES, a company has been formed with a capital of 50,000*l.*, in shares of 5*l.* each, to purchase for 9000*l.* a property in the Isle of Man 1120 acres in extent, and very favourably reported upon by Messrs. John and William Kitto, and Walter Eddy. The prospectus will be published in next week's *Mining Journal*, but in the meantime it is pointed out that there are most unusual features in connection with the company, which the promoters believe should commend it as a company to all. First of these is the manner of its reconstruction; five of them, it is explained, kept it going during liquidation, arranged and paid landowner's claims for surface drainage, and rent and royalties, obtained new leases for an enlarged and wonderfully improved sett, at considerably reduced rent and royalties, besides purchasing all interests from the liquidator—in fact, they are out of pocket about 12,000*l.*, and are now offering the whole inclusive for 9000*l.*, in the strong hope that future success will compensate them. This they are aware reads strangely, but it is literally true nevertheless. Now as to the property as a mine. It is thought that the reports of Capts. Eddy, Kitto, and Kitto, none of whom are in any way pecuniarily interested, speak for themselves, and the directors further think that their mine manager, and themselves also, know something of its features which fill them with confidence as to its future. At any rate if they do not succeed they will deserve to do so. They have one piece of ore ground now about 15 fms. long, spangled throughout more than 4 ft. wide with lead ore and blende, besides many others, so that it cannot be called a hopeless task at any rate.

TANKERVILLE.—A much improved report has been received this week. The 180 east is worth 6 tons of lead ore per fathom, and the 180 west 3 tons per fathom, and, according to the dip, the great bunch of ore found above should still be ahead of this level. The winze below the 180 west is worth 4 tons per fathom. The 167 west is entering a new run of ore ground. The cross-cut to the lode at the 192 will be commenced next week, when the sampling will be 125 tons, being an increase of 25 tons.

WEST TANKERVILLE.—The 75 south is holed to the winze sunk from the 65; the lode in the end is worth 1½ ton of lead ore per fathom. Next week two stopes will be commenced north and south of the winze, each in ground worth 1½ ton per fathom. The four stopes in the 65 are worth respectively 1 ton, 1 ton, 1½ ton, and 1 ton per fathom, and the stope in the 50 is worth 1 ton per fathom. The aggregate value of the above points is 10 tons per fathom.

NORTH LAXEY.—There is a decided improvement reported in the lode in the shaft, as it is now said to produce "good saving stuff at the deepest point, with every appearance of being close upon a good lode." The stopes are yielding as usual.

ROOKHOPE.—There are two stopes in the back of the 15 fm. level being worked at 30s. and 27s. per fathom, value 1 ton and 1¼ ton of lead per fathom, and there is a large reserve of good ore ground over this level. The driving of the 42 has been resumed, and is evidently entering on a good course of ore.

WEST PATELEY BRIDGE (Lead).—Mr. David Williams, M.E., writes as follows:—"I am pleased to say that all points of operation are turning out as good as can possibly be expected. We have a splendid lode in the 56 fm. level." This level is being driven upon the Craven Cross vein, which when last worked (1790) yielded enormous profits. This level, extended from the joint horse adit, drains to a depth of 56 fathoms the group of 12 or 14 productive veins which intersect the three-quarters of a mile area held by the company. The ore-bearing part of the famous Craven Cross vein stands high and dry to a depth of 56 fathoms for more than a quarter of a mile in length. Vigorous operations have been commenced at several additional points with satisfactory results.

COMBMARTIN.—Some of its large shareholders have just visited the mine, and were much pleased with the vigorous way in which the operations have been carried on, and they were also fully convinced of the excellent prospects of the mine. Although the works up to the present moment have been chiefly confined to clearing up the levels driven by the former workings, several tons of silver-lead have been brought to surface, and dressing-floors are in course of formation for the purpose of preparing the ore for market. There are 12 men working on ore ground, and when the levels are extended into unexplored ground there is every probability of profitable returns. The mine is in 6000 shares, the present price of which is about 60s. each, or 3000*l.* for the mine. Considering the prospects, and that the property can be worked extensively without machinery, the shares may be considered as at far below their intrinsic value. There are many mines where the expense of pumping power is a serious item, and where the prospects are not to be compared with those of Combmartin, which are, nevertheless, standing at a much higher market value. But mining ever has been, and probably ever will be, full of anomalies of this character.

WEST SETON.—We still hear a highly satisfactory account of the various points of operation in this mine, and the probability of valuable discoveries being made shortly. The exploration of the lodes in the western part is of the utmost importance. There are 230 tons of copper ore for sale this week.

NEW CONSOLS.—"Observer" writes from Truro:—There is a paragraph in the West Briton which is erroneous in several respects. 1. There is no change of management in New Consols, nor is there a prospect of such a change as far as I am aware of.—2. So far as Capt. R. Pryor's management is concerned no fault can be found, and several first class agents have borne their testimony to the legitimacy thereof.—3. 100,000*l.* has *not* been spent on the works, much less at the surface.—4. The lode is so wide as to yield abundant stuff *above* the bottom level for years to come—more than can be utilised with all the appliances for "returning" same for market. If there has been extravagance in surface erections, Capt. Pryor is not at fault, as he was subject to directors' control in relation thereto.—*West Briton.*

*** With this week's Journal a SUPPLEMENTAL SHEET is given, which contains: Original Correspondence: Atmospherical Influence in connection with Colliery Explosions; the Mining Industry of Chile—No. II (H. Sewell); the Richmond Company *v* Chilian Mining (J. Sewell); Chili, and its Commercial Credit (J. Sewell); Parys Mountain Copper Mine; New St. Cyres, Devonshire (E. T. May); Lanner Valley (J. Lean); Mutations in Mining; West Chiverton Mine (W. Tregay); Capt. Tregay, and Pedn-andrea Mine; Holmbush Mining Company; Great Wheal Vor, &c. (R. Symons); West Maria and Fortescue—Boring Machine; South Condurrow; Mining Derivatives; Well selected Mines as Investments (G. Budge); Tin Production in Queensland (J. V. Williams)—Government Inspection of Mines—Stone-Breaking Machines—Foreign Mining and Metallurgy—Foreign Mines—Patent Matters—Meetings of Skerne Ironworks, Vancouver Coal, Cesena Sulphur, Devon Great Consols, Carn Brea, and Tincroft Companies, &c.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
May 17	Hornichos	40 15	£5 16 0	Nevill, Druce, and Co.
22	Coed Mawr Pool	11	13 18 6	—
23	Llanrewmbach	8	13 6 0	Nevill, Druce, and Co.
24	De Broke	20	13 13 0	ditto
28	Caldbeck Fells	7 3 3	12 11 0	ditto
—	ditto	1 15 0	4 14 0	ditto
—	Pandora	25	13 0 0	Walker, Parker, and Co.
29	Grogwinion	100	13 7 0	Nevill, Druce, and Co.
—	Frank Mills	50	9 4 6	ditto
—	ditto	15	7 7 6	ditto
—	Plynlimmon	20	13 3 0	Walker, Parker, and Co.
31	Van	400	14 2 6	ditto
—	ditto	50	14 7 6	ditto
—	ditto	20	14 6 6	Adam Eyton.

BLENDE.

Date.	Mines	Tons.	Price per ton.	Purchasers.
May 31	Van	150	£4 10 0	G. G. Blackwell.
June 1	Roman Gravels	50	3 8 6	Vivian and Sons.

BLACK TIN.

Date.	Mines.	Tons c. q. lb	Price per ton.	Amount.	Purchasers.
May 30	Pedn-an-drea	10 7 1 5	—	£439 13 0	—

COPPER ORES.

Date.	Mine.	Tons.	Price per ton.	Purchasers.
May 28	Caldbeck Fells	5 9 0	£5 10 6	Nevill, Druce, and Co.

WANTED, by the Advertiser, a SITUATION as FOREMAN in a LEAD WORKS. Thoroughly understands the Manufacture of Lead in all its branches. Unexceptionable references.
Address, "Z.," care of Mr. Palmer, 75, Broad-street, Ratcliff, London, E.

TO AGENTS OF MINES, AND OTHERS.

MR. R. PASCOE, MINING ENGINEER, LAND SURVEYOR AND GENERAL DRAUGHTSMAN (Fourteen years with JAMES HENDERSON, Esq., C.E.) Mines surveyed or inspected, and faithfully reported on. Terms moderate.
OFFICE—4, ST. MARY'S STREET, TRURO, CORNWALL.
A vacancy for a Pupil.

MINING INVESTMENTS.—The present time being considered a favourable one for mining operations, the ADVERTISER, who has had nearly 30 years' experience in mining—17 in Cornwall, and 12 in the management of mines in London—OFFERS his SERVICES in all matters relating to Mining Companies and advice in the selection of Shares in *bona fide* and well managed concerns, either for investment or speculation.
Having an established correspondence with some of the most eminent miners and mineowners in the kingdom, he has exceptional facilities for acquiring early and sound information on prominent mining properties.
A Selected List of Mines forwarded on application.
CHARLES BROUGHAM PARRY, St. Michael's House, Cornhill, London.

MESSRS. J. TAYLOR AND CO.,
MINING ENGINEERS AND INSPECTORS,
56, LONDON WALL, LONDON, E.C.,
Have Agents in England, Scotland, Wales, and on the Continent.

ZINC ORES.

ARMAND FALLIZE,
INGENIEUR-CIVIL, A LIEGE (BELGIUM
BUYER
1.—CARBONATED AND OXYDED ZINC ORES (CALAMINE, &c.
2.—ZINC AND LEAD ORES MIXED TOGETHER, BUT DRESSABLE KINDS ONLY

CAPPER PASS AND SON, BRISTOL,
PURCHASERS OF
LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, HARD LEAD, BRASS SLAGS AND ASHES, COPPER REGULUS, MATTE, SCORIA, TIN ASHES, TERNE ASHES, &c., and MIXED ORES or REFUSE, containing LEAD, COPPER, TIN, or ANTIMONY.

GEO. G. BLACKWELL,
5, CHAPEL STREET, LIVERPOOL,
PURCHASER OF
MANGANESE, ARSENIC, FLUOR-SPAR, WOLFRAM, BLENDE, CALAMINE, CARBONATE and SULPHATE OF BARYTES, ANTIMONY ORE, CHROME ORE, MAGNESITE, EMERY STONE, PUMICE STONE, OCHRES AND UMBERS, CHINA CLAY, LEAD ORE FOR POTTERS, TALC, &c.

T. R. GLOVER,
MINERAL DEALER AND BROKER AND GENERAL FINANCIAL AGENT
2, EXCHANGE STREET EAST,
LIVERPOOL.

HENRY SEWELL, M.E., F.R.G.S.,
Many years practical experience in CHILE, PERU, MEXICO, SPAIN, and the UNITED STATES.
10, UPPER WESTBOURNE TERRACE, W., LONDON.

MR. JOHN B. REYNOLDS
STOCK AND SHARE DEALER,
NOS. 70 AND 71, BISHOPSGATE STREET WITHIN,
LONDON, E.C.
BUSINESS TRANSACTED IN STOCKS AND SHARES AT NET PRICES.
Established 19 years.
Bankers ... ... City Bank.

Mr. E. JACKSON,
Associate of the Royal School of Mines,
ANALYST AND ASSAYER.
Assays or Complete Analyses made of Copper, Silver, Lead, Zinc, Tin, and other Ores. ASSAYING TAUGHT.
106, QUEEN VICTORIA STREET, LONDON, E.C.

WM. W. KENRICK AND CO.,
CONTRACTORS.
ROCK BLASTING, SHAFT SINKING, TUNNELLING, MINING, &c., WITH DRILLING MACHINERY, HIGH-EXPLOSIVES, AND ELECTRICITY.—A SPECIALITY.
WORK SOLICITED AT HOME AND ABROAD.
(LONDON OFFICE),
8, VICTORIA CHAMBERS, WESTMINSTER.

SULPHATE OF BARYTES FOR SALE.
Samples forwarded on application to—
MR. GEO. KING PATTEN, Secretary.
Llan Gan Mining Company, 47, Ann-street, Birmingham.

MESSRS. HARLAND AND CO., STOCK AND SHARE DEALERS, 38, GREAT ST. HELEN'S, BISHOPSGATE STREET WITHIN, LONDON, E.C.
Messrs. H. and Co. have Special Business in all British and Foreign Dividend-paying Mines, Foreign Stocks, and every description of Securities.

Messrs. HARLAND and Co. have dealings in—

25 Altami.	15 Flagstaff.	25 Pandora.
50 Chapel House.	10 Glenroy.	12 Pateley Bridge.
50 Thorps Gawber.	25 Gorsedd and Merllyn.	100 Penstruthal.
100 Aberdaunant.	5 Great Laxey.	20 Rookhope.
50 Bampfylde.	50 Kingston Consols.	20 St. Harmon.
10 Blue Tent.	30 Llanidloes.	25 South Condurrow.
50 Court Grange.	20 Marke Valley.	10 Van.
75 Don Pedro.	25 North Laxey.	20 Van Consols.
15 Denbighshire.	25 Pennant.	20 Wye Valley.
20 East Van.	50 Pennerley.	20 West Chiverton.

FOR SALE, the WHOLE or PART:—

100	ABERDAUNANT..	£ 13 0	5	LISBURNE	£30 0 0
25	EAST VAN.....	5 0 0	20	WYE VALLEY.	
20	GORSEDD & MERLYN.		20	GLENROY.	
25	GLYN	1 10 0	30	MONYDD GORDDU ...	3 0 0
200	PARYS MOUNTAIN	0 8 0	10	TANKERVILLE	7 5 0

Address, H. WILKINS, 3, Heybourn Villas, Tottenham.

BODIDRIS, GORSEDD AND MERLLYN, AND OTHER LEAD MINES IN NORTH WALES.

MR. T. E. W. THOMAS, of 3, GREAT WINCHESTER STREET, E.C., is on a VISIT of INSPECTION to the above, and will be prepared to advise as to the most eligible for investment.
Letters, until Tuesday, may be addressed Black Lion Hotel, Mold, Flintshire; afterwards to 3, Great Winchester-street.

MR AD DE KATOW, CIVIL AND MINING ENGINEER, of 14, BLURTON ROAD, CLAPTON PARK, E, has now OPENED an OFFICE at 94, GRACECHURCH STREET, E.C. Surveys, designs, plans, specifications, &c., and superintendence of all works connected with the profession promptly attended to on moderate terms.
Sale and Purchase of Mining Properties negociated (several now for disposal presenting unusual advantages). Engineering.

VAN LEAD MINE.—Particulars of this very valuable Mine will be found in the SIXTH EDITION of Mr. MURCHISON'S work on BRITISH LEAD MINES, published THIS DAY, with Maps, &c., price 2s. 6d. The Prefaces to the Six Editions price 1s.
8, AUSTINFRIARS, LONDON.

TANKERVILLE.	ROOKHOPE.
ROMAN GRAVELS.	NORTH LAXEY.
GREAT LAXEY.	GLENROY.
MINERA.	WEST TANKERVILLE.
LEADHILLS.	PANDORA.
DERWENT.	

Full particulars of the above and other valuable LEAD MINES will be found in the SIXTH EDITION of Mr. MURCHISON'S work on BRITISH LEAD MINES, published THIS DAY, with Maps, &c., 2s. 6d. The Prefaces to the Six Editions, 1s.
8, AUSTINFRIARS, LONDON.

"Contains a good deal of information that may be useful at present. Mr. Murchison's theory is briefly that on the average British Lead Mines have less of the lottery element in them than any others, and the figures he gives seem to support that view; at all events, those interested in this industry will find his facts and observations worth reading."—*Times.*
"Calculated to be a great benefit to investors."—*Mining Journal.*
"We have great pleasure in recommending his treatise."—*Morning Post.*
"We invite capitalists to look into this means of investment."—*Money Market Review.*

IMPORTANT TO CAPITALISTS.

FOREIGN BONDS.—These should be sold before prices recede still further.
MESSRS. ALEXANDER ROBINSON AND CO. recommend for purchase:—
LIGNO MINERAL WOOD PAVING SHARES,
VAN MINE, ROMAN GRAVELS, and
COMBELLACK TIN MINE.
The "Stock Exchange Review" (specimen number sent free) contains particulars of these and many other good investments, and should be read by large and small capitalists. The firm will have pleasure in supplying information based on practical knowledge.
36, Throgmorton-street, London, E.C., April 28, 1877.

MR. W. TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C.,
Deals in all descriptions of Stocks and Shares at close market prices.

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be Filed on receipt; it then forms an accumulating useful work of reference.

WEST GREAT WORK.—The information asked for in last week's Journal could not have been from "A Shareholder," each one having had posted to him the various printed circulars and particulars regarding the financial position and prospects of the mine, from which he would learn how matters stand; however, if he is really "A Shareholder," and is without the information sought, he has only to apply at the offices of the company, when a duplicate set of circulars will be sent to him.—GRANVILLE SHARP, Secretary.

SIR,—Would some reader be so kind as to answer the following questions in the Journal? An adventurer having relinquished his shares, is there any stated time during which the purser or secretary shall present to the said adventurer a statement of his liability; and, if so, and the statement be not rendered, is the adventurer still liable?—IGNORAMUS.

BAZIN DREDGER.—"E. B." (Rue Drouot).—Your enquiry shall be answered through the post.

GOLD MINING.—"24" (Aberdeen).—The best work we are acquainted with of the character you mention is that of Mr. J. S. Phillips, M.E., of San Francisco, U.S.—the Explorers, Miners, and Metallurgists Companion. The price is $10½, and it can be obtained direct from the author. It will be best to send International Post Office Order for about 45s. There are, we believe, no copies to be had in this country.

DUCATION FOR MINERS.—"H. R." (Truro).—Mining schools have only in one or two instances succeeded—those being in Germany, where, as a rule, the students entering have the advantage of being well grounded in general knowledge previously—except when connected with an ordinary college or similar institution. The Columbia College (New York) School of Mines has been a marvellous success. The Science and Mining Schools at Montreal have already been referred to in the Journal.

W AND ECONOMIC MINING EXPLOSIVE.—"T. N." (Camborne); "D. S. and Co." and others.—The letters forwarded to our office will be handed to the parties interested, who will, no doubt, reply direct. A company is in course of formation for developing the invention, full particulars of which will be published in a few weeks.

NEW CONSOLS—"X. Y."—A notice of the extraordinary meeting of this company appears in another column of this day's Journal.

Mr. C. Colwell, on Prevention of Colliery Explosions, shall appear next week.

Received,—"G. L." (Parys Mountain)—"A. R." (Lynn)—"Constant Reader" (Windsor)—"D. G."—"Old Subscriber" (Glasgow): We never heard of such an occurrence; write to the person named—"Silvarian;" The publication of such details would occupy more space than we could devote—"N. W."—"A Creditor" (New Consols)—"Shareholder" (Roman Gravels)—"J. D." (Leeds): The letter has been forwarded—"T. M."—"A. D."—"Shareholder" (Lynn): We could not publish such a letter; write to the secretary—"Reader" (Aberystwith): Yes—"X." (Ladywell) wishes the mine to be developed with more spirit, and fears that the manager is crippled in his efforts—"Shareholder" (Van Consols)—"Enquirer" (Bristol) should write to the paper in which the statement appeared—"Another Shareholder" (Roman Gravels)—"Another Country Cousin" (Talkerville and Roman Gravels). Correspondents should, in fairness, attach their names to letters in which the competence or conduct of the officials is impugned—"Shareholder" (Holmbush).

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, JUNE 2, 1877.

COAL TRADE PROSPECTS.

During the recess whilst Parliament has not been sitting several articles have appeared in the daily papers with respect to the coal trade and its prospects. The views of some of the writers are quite original, and built on anything but a practical acquaintance with the subject. We are told now that there is every appearance that the demand for coal will greatly improve owing to the war, and the demand for war materials, in the shape of iron and steel, for various purposes. This opinion is certainly not shared in by our colliery owners, otherwise we should not have seen them reducing their miners' wages, and ready to set down their pits should the miners refuse to agree to the terms proposed. In the Newcastle district several thousands of colliers have struck in reference to the wages question, in Fifeshire about 6000 are out for a similar cause, whilst in Staffordshire some hundreds are walking about idle. This does not look like trade improving, but rather the contrary. At the present time coal is a drug, and this the men and their leaders know perfectly well, and as a panacea for it the delegates to the National Miners' Association from West Yorkshire are to propose that gross absurdity that all the pits in the county should be set down for a month or six weeks. During the last five or six years we have had more fluctuation in the coal trade than was ever known previously, whilst the same remark equally applies to the miners' wages. But we have now come back to something like what we were in 1876, so far as regards the price of coal. When the rise began in 1871 the average price of coal at the Durham pits was 5s. 2d. per ton, and after that up to the close of 1873 it bounded upwards, at one time reaching something like 30s., or even more; but for the first quarter of the present year the average selling price was rather less than 5s. 6d. per ton. The consequence is that the colliery owners are worse off at the present time than they were at the close of 1870, for then the working expenses were considerably less than they now are, for there was not the Mines Regulation Bill to contend with. For the present the stoppage of so many collieries will be no inconvenience, as other districts are in a position to make up the deficiency caused by the strikes. Should the latter continue for any length of time prices of coal will go up—it may be a shilling or two a ton; but the probability is that work will shortly be resumed by all the men now out, seeing that the Associations are not in a position to maintain them. This is most certainly the case with respect to the colliers in the Newcastle district, many of whom no doubt now regret the breaking down of the old system of annual hiring, by which wages did not go up and down with the price of coal, but were maintained for years without any material variation.

Looking at the house coal trade, we do not see how it is likely to improve, for the consumption at home must now fall off, whilst our exports of it are by no means large. London is the largest customer for that description of fuel, but even with the Newcastle collieries closed there will be no lack of supplies, so that the coalmasters sending by railway will be benefited, but not to the extent of leading to any material change in the price. At many of the mines in the inland districts the workmen are working short time, and this in itself will have the effect of preventing a rise, for we cannot see how the consumption can overtake the production under such circumstances, unless, indeed, there should be a sudden and extraordinary demand for iron of every description, but that is not likely to be the case. With respect to gas coal, there is not likely to be any increase worth speaking of, for we shall shortly be inside the season, when less is required than during any other part of the year. The contracts are, of course, for monthly delivery, so that the general trade is not likely to be in any way interfered with so far as relates to gas coal. With the same force the remark applies to engine coal, the business doing in which is likely to remain in the same condition as it is at present, for the prospect of any marked improvement in the general trade of the country is most remote. The war, indeed, is likely to tell seriously against many of our staple productions, and even after it is over it will be left in about the same state.

There is, however, one description of coal that will benefit by the war so long as it lasts. Steam coal for vessels of war cannot fail to be in good demand. It will be required not only for the Russian and Turkish navies, but also in increased quantities for our own war vessels, for we shall have more in commission than hitherto. The Baltic ports may now be said to be open for ordinary vessels, so that a great increase in the usual quantity taken will be the result. When at peace the Russian war steamers are not so particular as to the coal used, and large quantities have not only been sent from the Welsh and North of England, but from the Humber ports as well. But now there may be a difference. When at war, as a rule, the coal used is that which makes little or no smoke, so that a vessel leaves as little indication as to its whereabouts as possible. The Welsh smokeless steam coal, and some of the North of England, are likely to be in the best request. In our Navy we believe there is a mixture of the two, which answers very well. On the other hand, the mercantile marine is likely to have a busy season of it, so that the demand for steam coal from almost every district is likely to be good. For the English fleet no doubt a large quantity will be sent to the Mediterranean, whilst Turkey will also take considerable supplies; for, although coal is considered to be contraband of war, there will not be much difficulty or risk in reaching the ports where the Turkish vessels may be stationed. Such being the case, it may safely be inferred with such increased activity in the steam coal trade there will be a rise in the price. But we cannot see how other descriptions of coal can be seriously affected by the war. As the demand for steam coal in the North of England is likely to increase it certainly is to be regretted that so many thousands of the men have thought it to their advantage to strike, for had they waited patiently to see how the war proceeded the probability is that they would have had a return to the old rate of wages, for it would be to the interest of colliery owners, when receiving a fair price for their coal, to find their workmen plenty to do and pay them wages accordingly. But, not having done so, the loss sustained by them will be the result of their own folly. They should also remember that with the many large collieries recently opened out there must be a very great change indeed if ever wages should come to anything approaching what they were in 1872 and 1873.

THE COAL PRODUCTION OF THE WORLD.

It is very difficult, if not impossible, to give the coal production of the various countries of the globe for any one year; but subject to this remark, we may state that the aggregate annual extraction of coal throughout the world is now computed at 273,000,000 tons or thereabouts. In this vast total, we find Great Britain figuring for no less than 133,300,000 tons, or 48·83 per cent. of the whole production. Some distinguished statesman once observed that the country which had the most coal possessed also the most industrial power, and there can, we imagine, be little doubt that this was a just and sound observation; the only question, of course, is whether we are not exhausting our coal resources, and in consequence undermining our industrial strength. Whatever answer may be given to this question, the great tangible fact of these present times is that we are the most important commercial and industrial nation on the face of the globe, the most puissant councillor and the most trusty henchman of that mighty potentate King Steam. The United States appreciate the value of coal, and their production is by no means unimportant; nevertheless, it does not exceed 46,500,000 tons, or not more than 17·03 per cent. of the world's extraction. The United Kingdom raises annually about 4½ tons of coal per head of its population; in the United States the corresponding proportion is little more than 1 ton per head. The Americans, probably, burn much more wood than the English; still, after making all allowance for this, it is clear that Great Britain is a far more important country in respect of the development of manufacturing industry, and in respect also of the exportation of coal, than the United States of America. It is a matter, however, for grave consideration whether our very greatness and pre-eminence as a manufacturing nation does not carry with it the seeds of decay and decadence. Thus envious foreigners, such as the French, the Belgians, the Germans, and the Americans, are all bent on obtaining a slice of that world-wide business which we have so long enjoyed; and the publication from time to time of our somewhat pompous industrial statistics, and the ostentation and luxury of our manufacturers, have excited the cupidity, aroused the discontent, and destroyed the docility of our own working classes, so that our country cannot rely, as hitherto—or, at any rate, to the same extent—upon that happy harmony between capital and labour which is, after all, the real basis of a nation's industrial prosperity and strength.

To return to the question of the world's coal production, it is interesting—and at the same time rather startling—to note that Germany now produces nearly 45,650,000 tons of coal annually, or 16½ per cent. of the estimated aggregate coal extraction of the human race. Although the Germans do not make quite so much noise as the Americans as regards their pursuits and proceedings, they are, nevertheless, pressing JONATHAN rather hard in the important matter of coal extraction. After the Germans the French rank next among the coal-producing nations of the world, but there is a wide difference between the comparative coal extraction of Germany and France, the production of coal in France in 1875 having been only 16,949,000 tons, or 6·21 per cent. of the world's annual coal supply. Belgium stands fifth among coal-producing countries, her annual extraction being returned at 14,407,000 tons, or 5·28 per cent. of the whole estimated supply. The Austro-Hungarian empire has attained to an annual coal extraction of 10,389,000 tons, or 3·81 per cent. of the general aggregate. Although Russia is of vast extent, the CZAR'S great empire has not made much progress as regards coal mining, the Russians raising only 1,346,000 tons annually, or just 0·49 per cent. of the globe's production. The comparatively young British colony of New South Wales raises almost as much coal as Russia, having produced in 1874 1,298,000 tons.

CERTIFICATED COLLIERY MANAGERS.

Last week we noticed that the Yorkshire Certificated Colliery Managers' Association, which had been in existence almost since the last Mines Regulation Act had come into operation, was dissolved, but not without some dissent. The objects for which the Association was called into existence may have had no foundation, as has been proved to be the case, but there is other work which such a body might well have taken up, and given an example to other districts that would undoubtedly have been followed. The certificated colliery managers are a numerous class, for there must be close upon 4000 of them in the kingdom, yet we are not aware that there is any society of them formed for the purpose or relieving indigent members, providing for their widows, or educating their children. Wealthier bodies have such institutions, for we have the Freemasons, Licensed Victuallers, Army and Navy, Commercial Travellers, and Theatrical, and many other well-known bodies, who find homes for the less fortunate of their brethren, and schools for their children. Then we have the various London guilds, originally established for the purpose of protecting the different trades, yet the object for which they were established exists no longer. Still the capital that was originally subscribed, and the bequests left, have been turned to an excellent purpose. Schools like the Merchant Tailors' have been created, almshouses erected, and large sums of money annually subscribed for different charitable institutions. Yet we are not aware that the colliery managers have a single association for the relief of those amongst them who have been unable to provide for the time when they were no longer able to work, or to help the widows and children of those who may have perished whilst heroically engaged in saving others from that death which has overtaken so many in our collieries. No men are more liable to be called away from the world in a summary manner whilst engaged in the performance of their ordinary duties than colliery managers, and we certainly think it is a duty incumbent on them to make some such provision as we have indicated for those they leave behind them.

It may be said that the wages paid to those who have the management of collieries is such as to place them in a position to amply provide for their families; but this is not the case. Many promising young men have been suddenly called away—the same as poor PARKIN JEFFCOCK at the Oaks Colliery explosion—when they have not had time to save money. It may also happen that a man in the performance of his duties is injured for life, and then has nothing to fall back upon, or laid up by disease, by which his little stock of capital has been exhausted. These are not imaginary cases, for there are few mining districts where illustrations of them cannot be met with. But how easily could a remedy be found for all such cases, by which support could be given, without leaving deserving men dependent on employers or others for the means of living when incapacitated for work. The working miners have Unions for the support of their members, or for maintaining widows and orphans, and we certainly do not see why the managers should not have them also. They cannot rely upon having good health at all times, no more than they can on immunity from accidents; nor yet can they be sure of having a sufficient sum of money to retire upon when they might, from any cause, be obliged to do so. As we have before stated, there will be about 4000 colliery managers in the kingdom, and if they only subscribed 1*l.* 1*s.* annually, what a glorious fund they would have in the course of a few years. They would then be able to provide for those who could not support themselves, and raise buildings for that purpose, as well as for education, that would give them a status and a power in the land which they do not now enjoy. There is an opening here for the filling up of a want that will be recognised by colliery managers, and it only requires a few persons to step forward and take the initiative in carrying out a work that would cause them to be remembered with gratitude by generations to come. The time is most opportune, and we have every confidence in calling attention to such an important matter, feeling assured that our colliery managers will aid in carrying out such a holy work to a successful issue.

GOVERNMENT INSPECTION OF COLLIERIES.

THE NORTH AND EAST LANCASHIRE DISTRICT.

The report of Mr. JOSEPH DICKINSON, F.G.S., upon this district is unusually favourable, both the number of separate accidents and the number of resulting deaths being lower than in any year during the past quarter of a century. There were but 44 separate accidents, resulting in 51 deaths. The next lowest year was 1860, when there were but 53 separate accidents, resulting in 58 deaths. The average for the ten years ending 1861 was 63·3 separate accidents, resulting in 90 deaths. The average for the ten years ending 1871 was 62·8 separate accidents, resulting in 69·8 deaths. The returns made to Mr. Dickinson show that the number of persons ordinarily employed during 1876 in and about the mines under the Coal Mines Act was 30,382; and that 8,364,179 tons of coal, 83,584 tons of fire-clay, 4500 tons of alum shale, and 86 tons of copperas limpe, being a total of 8,452,349 tons of mineral, were produced. Also that 44 separate fatal accidents, resulting in 51 deaths, happened to persons employed in and about the mines. The ratio of the casualties is one fatal accident in every 690, and one death in every 595 persons employed, and a produce of 192,098 tons of mineral per accident, and 165,732 tons per death. Numerically as well as proportionately, the accidents and deaths are more favourable than previously. During the preceding quarter of a century, when the number of employed and the production was much less, the accidents have varied between 52 and 78 per annum, and the deaths between 58 and 138, the average per annum having been a fraction over 64 accidents and 80 deaths. Of the 30,382 persons employed 25,048 were below ground, and 5334 above ground. The number of collieries in the district is 371. The average output of mineral per person employed in and about the mines is 278 tons, which is an increase of 7 tons per person, as compared with the preceding year.

The limitation of the hours of employment of young persons and women, and the schooling of boys between 10 and 12 years of age, continues to enquire enforcing. Notices are posted up specifying the hours allowed below ground, but at large collieries, where it takes a long time in getting the miners into and out of the pits, difficulty still exists in causing the boys and young persons to come out in the same succession as they entered. The enforcement with respect to the persons affected above ground is much more easily met by similar notices, with the meal times specified. The Education Acts during the last two years have been restricting still further the employment of some of the above named by requiring attendance at school up to 13 years of age. The Elementary Education Act, 1876, which the Inspectors of Mines have to enforce in mines, goes still further. Under it, as soon as the exemptions lapse, all persons under 14 years of age unless they shall have obtained a certificate either of proficiency in reading, writing, and arithmetic, or of previous due attendance at a limited number of schools during each year for five years, will be prohibited from being beneficially employed unless they receive efficient instruction in reading, writing, and arithmetic. The effect which this will have on the training of boys in mining remains to be proved. Already in this district under the previous milder restrictions the number of persons under 16 years of age employed below ground has greatly diminished. As compared with the year 1873, those between 10 and 12 years have diminished about one-half, those between 12 and 13 about one-third, and those between 13 and 16 about one-eighth, whilst those 16 have remained nearly the same.

The weighing clause in the Act continues to work as well as could be expected. The check-weighers usually get on satisfactorily, but in two instances that have come under his notice during the year legal proceedings have been taken against them for interfering beyond their duties. A long strike has ensued at a large colliery consequent upon changing from measure to weight. In the latter instance the question of price in making the change had been duly arbitrated by an eminent Queen's Counsel, but the miners so afterwards refused to abide by the award, the stalking horse being that the different kinds of coal had not been rightly averaged. In two instances also during the year where exemption from weighing was applied for Mr. Dickinson, as on previous occasions, finding that the miners whose wages depended upon the amount of mineral gotten were not agreed amongst themselves, settled his recommendation thereon by the ballot. In one instance the majority proved to be for weight, and in the other for measure.

COLLIERY PROSECUTIONS IN THE MANCHESTER DISTRICT.—At Leigh, on Monday week, Mr. Peter Howcroft, manager of the Shakerley Colliery, upon the information and complaint of Mr. Dickinson, Her Majesty's Inspector of Mines, was fined 1*l.* and costs for not seeing that double doors were provided, so that one door might check the other, where doors were required to be used between the main intake and return air courses. At the County Sessions Court, Bolton, on Thursday last (May 31) Mr. Wm. Spedding, managing owner of the Hilton House and Red Moss Colliery, likewise, upon the information and complaint of Mr. Dickinson, was fined in the full penalty of 20*l.* and costs for permitting persons to be employed below ground in the Yard Mine, at Westhoughton, without having in communication therewith the required two shafts or outlets. The work going on, it appeared, was not for the purpose of either proving the seam or effecting the second communication, but the actual working out of the coal.

EXPLOSIVE PROPERTIES OF COAL GAS.—Judgment was given on Wednesday in the Board of Trade enquiry at Liverpool into the explosion on board the steamer Levant, on April 28, during a voyage from Cardiff to Gibralter, and the loss of one life in consequence. The explosion was one of gas, which had been generated by the cargo of South Wales steam coal. In giving judgment the Court said that the explosion, coming so soon after a similar accident at Cardiff, on the ship Atalanta, satisfied them that it was absolutely necessary that all vessels carrying the description of coal in question should be fitted with special means of ventilation, and they would recommend this to the serious consideration of the Board of Trade. They acquitted the master of blame in the matter.

GOVERNMENT MINE INSPECTION.—The official reports for 1876 just issued are favourable. The coal raised during the year was 134,125,163 tons, against 133 306,485 tons, yet the separate accidents were but 800 against 852, and the resulting deaths were only 893 against 1162. The number of miners employed was 514,532, so that the average output was 260¾ tons per annum per person employed. Including ironstone and shale mines, the reports show that there were 42 explosions of fire damp, killing 95 persons; 430 falls of coals from the sides and roof killed 442 persons; 120 accidents occurring in shafts killed 129 persons; 247 miscellaneous accidents underground and at surface killed 260 persons; making 839 separate accidents in all, and 933 resulting deaths. During 1876 there were 4385 collieries at work, and one life was lost for each 551 persons employed, and for each 159,688 tons of mineral raised. During 1875 there were 4501 collieries at work, and one life was lost for each 430 persons employed, and for each 118,730 tons. Thus upon comparing the figures the improvement was nearly 30 per

ent., taking the deaths on the number employed, and nearly 35 per ent. taking the deaths on the tonnage output. In the metalliferous ines the improvement has been still greater. During 1876 there ere 66 separate accidents, causing 70 deaths; whilst in 1875 there ere 110 accidents, causing 119 deaths. In metalliferous mines ere 110 accidents, causing 119 deaths. In metalliferous mines 7,497 persons (34,109 underground) were employed in 1876 against 8,073 in 1875; the accidents caused the loss of one life for each 88 persons employed in 1875, and only one death for each 821 per- ns employed in 1876. These results must be especially gratify- g both to miners and to the Government Inspectors, and it is to e hoped that the improvement will continue. The usual tabulated ummary of the reports will be found in to-day's Supplement.

COAL AND IRON IN THE UNITED STATES.—There has been no hange of importance in the manufactured iron trade of Pennsyl- ania; the amount of business doing is light and unsatisfactory. ompetition is keen, and prices are cut down to the lowest possible ates. There has been rather a better feeling in bar-iron at Phila- elphia, but we can report no material increase in the amount of usiness doing. The demand for plates is not quite so active at hiladelphia, but most of the mills have sufficient orders on hand to eep them employed for some time to come. The market for steel ails has been dull at Philadelphia, and the tendency appears to be owards rather lower prices; enquiries are reported to be numerous, ut there is no disposition to purchase freely unless liberal conces- ions are made. Efforts are being made to secure orders from oreign countries, and a sale of 2000 tons to a South American buyer s regarded as virtually closed. There is a difference of about $5 er ton between English and American quotations, but it is thought hat by increasing the production, and introducing various improve- ents in the manufacture, this difference can be removed. Quota- ions for steel rails range at Philadelphia from $47 to $48 per ton urrency at the mills. There has been little variation in the market or iron rails at Philadelphia. There has also been little change in ail at Pittsburgh; the mills are all busy, and some of them have old considerably ahead of their production, but prices are com- aratively unremunerative. The aggregate production of anthracite nd bituminous coal in Pennsylvania to May 5 this year amounted o 7,234,011 tons, against 5,947,119 tons in 1876.

NEW ELECTRIC LAMP.—An event of considerable importance will take place on Tuesday evening at the West India Docks—the ractical testing of the value of the improved electric lamp, in- ented by Mr. JABLOCHKOFF, and at present being introduced by essrs. Denayrouze of Southampton-street, Strand—the novelty in hich consists in placing the carbons side by side in an insulating ut fusible envelope, the result being that clockwork regulation can e entirely dispensed with. The insulating material used is kaolin, hich, in its solid state, is an insulator offering high resistance to he electric current, but which, under the influence of a powerful lectric current, becomes heated and liquifies, in which state it is no onger an insulator, but a conductor offering a slight resistance to he current, which, when passed through in this condition, affords light which is soft, steady, and brilliantly white, although it may e coloured by mixing with the kaolin the colour required. No echanism is required to regulate this light, which once set up ontinues to burn during the passage of the current until the car- ons are consumed, when they are replaced by others. The electrical rrangement consists of an ordinary magneto machine, which ends positive and negative currents alternately. From this ma- ine radiate wires by which the current evolved is conveyed to the ildings, or points at which it was required for use. The illumi- ating arrangement is put in circuit with these wires, and on the urrent traversing the carbon electrodes it fuses the kaolin and pro- uces the light. Thus, given a means of producing the necessary lectric current, any number of lights may be obtained from the ame electro motor, each dependent upon itself and all entirely in- ependent of each other. Any one light may be brought into use r extinguished when required, by merely connecting or disconnecting the wires in connection with them, whilst a light ay be replaced by another with equal ease. As many s 50 lights have been set up in one circuit with success. Recent xperiments, still being prosecuted by the inventors, show that the trength of the light thus obtained may be varied to any extent, rom an ordinary gas light upwards. Its modifications are as in- umerable as must prove its application. For the lighting of our reets, the lighting of public buildings, warehouses, private resi- ences, and numerous other obvious purposes its value cannot be verestimated. In production it is less costly than gas, and in its pplication it is void of all danger.

REPORT FROM THE NORTH OF ENGLAND.

May 31.—The condition of the Iron Trade during the past few days can scarcely be described as one of improvement. There was a fair attendance on 'Change at this week's Middlesborough market, but the disposition shown to enter upon business was very trifling. The production of pig-iron has now been limited by the blowing out of half a dozen furnaces. This will represent a difference of 2000 to 2500 tons of pig-iron per week, but after all the reduction of out put thus represented is only a drop in the bucket compared with the enormous capacity of the Cleveland district, which is now yield- ing at the rate of nearly 2,250,000 tons of pig-iron per annum. There is a general impression that stocks are increasing in makers' yards. This view will either be verified or disproved in a few days, when the monthly returns of the Cleveland Ironmasters' Associa- tion will be issued. Prices are not materially weaker, although it is not so difficult now as it was a few weeks ago to purchase iron at less than current rates. No. 1 is quoted at 45s. 6d.; No. 2 at 44s.; No. 3 at 42s.; No. 4 foundry at 41s.; and No. 4 forge at 40s. 6d. per ton, all less 2½ per cent. In the finished iron trade the principal business is being done among plate manufacturers and bridge builders. Messrs. Hopkins, Gilkes, and Company, and the Skerne Iron Com- pany, have some good contracts for bridge work on hand, and a new company is projecting the erection of a bridge-building establish- ment at Darlington. The shipbuilders' strike and lock-out on the Clyde has created a bit of a spurt on the north-east coast, whence the Clyde is threatened with its most formidable opposition. It is not, however, likely to be of long duration. It is not a little curious that several Glasgow firms of standing have recently placed con- tracts for the construction of new ships with North of England firms —the most recent, if not also the most notable instance, being that of the new vessels the Bull and the Bear, built on the Tees for Messrs. J. Watson and Company, of the western metropolis of Scot- land. Prices are still very poor, ship-plates seldom commanding more than 7*l.* per ton. Rails are almost as much as ever a thing of the past, the Cleveland rail trade being to all intents and purposes extinguished by the demand for steel rails. It so happens, however, that both steel and iron rails are at the present time under a cloud, and hence the determination of the directors of Bolckow, Vaughan, and Company to suspend for the present their new steelworks at Eston, which are more than three fourths completed, and could have been at work in the autumn had circumstances been so far propi- tious as to lead the directors to hasten their completion. Rails are quoted at about the same rates, from 5*l.* 10s. to 6*l.*, being the regular figure, but very little business is induced, and we hear more talk and glorification now-a-days over an order for 10,000 tons than would have occurred a few years ago over ten times that quantity. People in these times have somehow learned to be greatly satisfied with small mercies.

The meeting of the arbitrators and umpire appointed to deal with the proposed reduction of the wages of the miners of Cleveland has been delayed until to-day, owing to the presence of Mr. Alexander Macdonald, M.P., being required at Durham, where the National Miners' Union have been holding their annual Conference. Mr. Macdonald seems to think nothing of keeping others waiting his pleasure, for I happen to know that Mr. Dale has been detained in London for three days until the convenience of Mr. Macdonald could be suited. Now, this is just a little out of place, seeing that Mr. Macdonald, unlike Mr. Dale, is handsomely paid for his services. I happen to know that when he acted as arbitrator for the Cleveland miners last year they gave him 50*l.*, in addition to paying all his travelling and hotel expenses, and it is probable they will at least do as much on this occasion. One would think that in consideration of such a handsome honorarium even Mr. Macdonald might give the miners the benefit of his undivided services for two or three days, but the hon. gentleman's engagement at Durham, for which he is paid another 50*l.*, have come into collision with his obligations to the Cleveland men, and the latter have been put on one side for the time being. The award in the Cleveland miners' arbitration is not now likely to be issued before Saturday.

Much difficulty has been experienced in all proceedings relative to the wages of the miners of Cleveland in ascertaining exactly the basis on which they should be regulated. It so happens that fully two-thirds of the mineowners of Cleveland are also owners of blast-furnaces, and they do not sell the ironstone at all, but it is trans- ferred direct from the mine to the furnace, and receives its market value only through the pig-iron. As for the remainder of the mine- owners one-half at least supply the ore they raise under contracts of long duration—some of them even extending to 14 years—and hence the price does not fluctuate from one year's end to another. Owing to these facts there is very little ironstone absolutely free for sale in Cleveland, and this explains that which to many will seem extremely strange—that the market price of Cleveland ironstone is never quoted on any list of current quotations. Owing to the ex- ceptional conditions under which the Cleveland ironstone is disposed of the selling price of pig-iron appears to have been selected by both sides as the only fair and available determinant of the wages due to the men, but for obvious reasons this is not the most true nor the most direct test that might be applied to such an issue, and it would be well if the mode of marketing the ironstone were so simplified as to render its current value at all times available.

Arrangements are now proceeding for the impending arbitration relative to the wages of the Durham cokemen. The date is not de- finitely fixed, but it will be somewhere about the middle of June. The cokemen will this time be in the position of plaintiffs, and will open the case.

REPORT FROM CORNWALL.

May 31.—It is certainly cheering to see how confidently Mr. R. Boyns holds to his conviction that in the great tin-producing con- test now on between Cornwall and Australia the good old county will win the day. It deserves to for the pluck with which it has so long carried on, under circumstances so adverse, a struggle so despe- rate. Mr. Boyns holds, as we have always held, that whenever tin streaming in Australia has to give place to tin mining Cornwall will look up again, and his information leads him to believe that that day is not very far off. It is quite certain that so many of the once rich alluvial deposits of Australia has been already worked below the paying point that but for the discovery of fresh fields Austra- rian tin would now be little more than a memory of the past, and it may very well be that, as Mr. Boyns says, the present heavy supplies from Australia are to be accounted for by the despe- rate efforts made to avert the threatened collapse. These reflections do not afford much immediate encouragement certainly, but since none better are to be had we must be content with what we can get. The riots in the Straits are not likely to have much influence, and none of a permanent character, for they cannot do more than merely interrupt the supply for awhile, and a more thorough remedy for the present state of depression is needed than that, However, to a small extent this also will have its weight.

We are glad to see that the Miners' Association, to whose needs we last week called attention, has received of late some influential support. The list of subscribers now contains the names of Mr. Jonathan Rashleigh, the High Sheriff of Cornwall, who has strong hereditary connections with mining (the Menabilly collection of minerals is one of the very finest in private hands), the Earl of Mount Edgcumbe, and the newly-appointed Bishop of Truro. It is a good thing to see Dr. Benson so early in his episcopal career thus usefully identifying himself with the leading industry of his adopted county. We hope the example thus influentially and spiritedly set will be largely followed.

The attention of the proper authorities has been called to the numerous casualties which have recently attended the use of dy- namite, and with very practical effect, considerable quantities having been seized. The condition in which many of the cartridges were found fully bore out the caution which we gave. Dynamite is a very strong explosive, and a cheap explosive, and under certain conditions is very safe, but there is always the danger of leaking, or "sweating." While the nitroglycerine remains in a state of ab- sorption all is well enough, but directly it begins to separate itself, and to exude, danger begins also. There has been an enquiry also, by the way, into the use of dynamite for fishing purposes. A cartridge of dynamite exploded under water kills or stuns all the fish in the immediate neighbourhood. But it has its disadvantages. It de- stroys more than can be utilised and it frightens the fish off the ground. So the evidence of the Cornish fishermen has been almost universally against its continued employment.

Not many mines are sold for a 5*l.* note, and a good many "bals" are not worth even that. Better things may be hoped, however, of Creegbrawse, which has just fallen into the hands of its former manager—Capt. Bailey—for that amount. The district is very rich in minerals, and the workings in former times were so extensive that, in pre-vaccination days, as full of pits as Creegbrawse was the local simile for a deeply seamed face.

The discussion at the Cornwall Mining Institute monthly meet- ing upon Stone-Breaking Machinery, initiated by Mr. Campbell, was certainly practical, though it cannot be said that it introduced anything that was novel. The value of the stone-breaker is now generally admitted, and those who still have doubts concerning its adaptability to Cornish mining purposes will be able to see it at work at the show of the Royal Cornwall Agricultural Society at Camborne on the 12th and 13th of next month. Mr. Campbell rightly gives the preference to Mr. Marsden's machine with the patent reversible cubing jaws. He remarked further that a stone- breaker would undoubtedly break a ton of stuff cheaper than it could be broken by hand labour, allowing for depreciation of ma- chinery, and interest at 5 per cent. on the prime cost of the ma- chine, and at a cost so much less that if about to lay out new floors for a mine where large quantities of stuff would in all pro- bability be turned over one would not hesitate to erect one or more of these machines according to circumstances. But in considering the application of stone-breakers to Cornish mines they had to look at the case from a different point of view, for in the majority of cases the floors as at present arranged would need some alter- ation to obtain suitable levels for the advantageous working of a stone-breaker. In some mines the alterations would have to be conside- able, while others might very easily adapt their existing arrangements to suit a machine. Merely to place a stone-breaker on a mine without paying regard to the necessity of having suit- able levels, so that the rocks had to be lifted up to the breaker, and the crushed rock again to be lifted up in order to be conveyed to the stamps—in fact, so to place a breaker that a very large amount of manual labour was required for the different processes of feeding, &c.—was to render the stone-breaker almost useless as a source of economy. Capt. Tregay, of Pedn-an-drea Mine, had kindly furnished statistics which showed the saving in cost of break- ing by machine labour as compared with hand labour was at least 2½d. per ton, but then the larger the returns were the greater would be the advantages in favour of the machine.

In the case of Pedn-an-drea, where the cost of hand spalling was calculated rather below the average of many mines, and a very large charge was assumed for the alteration of the floors, there was yet a balance of more than 2d. per ton in favour of the machine. It was easy to believe that under different circumstances this saving might amount to 4d., and even more, per ton. But this was not all the economy gained by the use of a stone-breaker by any means, since, in addition to this actual saving per ton in breaking, there was another source of economy, due to the fact that the tinstuff left the machine so efficiently broken as to reduce the required stamping power at least 25 per cent., because the rock was so crushed and its texture so destroyed that the stamps could act upon it with far greater effect. Thus the breaker did also part of the work of the stamps. Again, economy was indirectly effected by the fact that the machine did the work with far greater regularity and certainty than could possibly be attained by hand labour, while so long as there was stuff to supply the machines there would be no difficulty in keeping the stamp passes fully supplied. Hand labour averaged from 6*l.* to 7*l.* per cent., but it practically cost more, as the work was very often inefficiently done, and the stamps were consequently prevented from doing their full amount of work. The question of the position of the stone-breaker on the mine was of the highest importance. The great object must be to make the process as auto- matic as possible. No definite rule could be laid down as to the position of the machine. That must depend to a great extent on local conditions, but the breaker ought to be so placed, as at Pedn- an-drea, that the stuff could be shovelled at once into the crushing- hopper. The chief point of the discussion was whether it was better to use one machine or two, whereon considerable difference of opinion was expressed. As a matter of personal experience, Mr. Cox stated that a small machine used at Perranuthnoe, if driven by artificial power, would with two lads have done the work of 20 girls at least.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

May 31.—The orders which had accumulated at the mills and forges during the late holiday week are not of any great extent, either as regards number or value. Still, with the old specifica- tions, they were sufficient to enable most of the works to resume on the first or second day of this week. And plants are now run- ning with the same regularity as has been manifest for several weeks past. Marked iron of good brands is still quoted at from 8*l.* to 9*l.*, but even for this description of product the prices are not very strong. Common unmarked iron, too, is weak, and in this de- partment North of England competition and Belgian competition is severe. No alteration for the better has occurred in the pig- iron trade. The demand continues to be very limited, and there are no signs of any early increase. Although the furnaces now on are producing in the aggregate only 6000 or 7000 tons a week, yet this amount is not all going into consumption. Stocks are still heavy, and more furnaces may be blown out at no distant date. Notwith- standing all this, high-class pigs are firm; hematites very so, at 3*l.* 15s., short weight delivered. For some brands 3*l.* 17s. 6d. is de- manded. Sellers of first-class Derbyshire pigs are in exceptional instances asking 3*l.*, but such vendors are freely undersold at 2s. 6d. a ton. The state of the Coal Trade is almost increasingly unsatis- factory. Furnace and forge and manufacturing qualities are all alike difficult to sell. And the advance of summer is unfavourable to the house coal districts. Some hopes are entertained of an early reduction in prices with or without concessions by the workpeople, and in anticipation of such a movement many of the non-associated masters and joint-stock companies are, it is stated, already revising their lists.

Perhaps the chief event of the week is the determination come to by Messrs. G. B. Thorneycroft and Co., of the Shrubbery Iron- works, Wolverhampton. This firm has resolved to offer for sale by private contract the whole of its Staffordshire establishments, which comprise iron and coal mines and blast-furnaces at Bradley, and mills and forges at Wolverhampton. It will be remembered that all the employees at the firm's Wolverhampton works were under notice to leave on June 30, and that such a course resulted from the present depression; but the firm now announce their in- tention of keeping on longer than the date named.

To consider a proposed increase of the capital of the company from 93,750*l.* to 125,000*l.* the directors of the Sandwell Park Colliery Company (Limited) have called a meeting of the shareholders for June 7. The Hamstead Colliery Company (Limited) has made a further call on its shareholders of 1*l.* per share, due on June 18. Consequent upon the above proposal the shares of the Sandwell Company have fallen, and since my last have been sold at only 7*l.* premium; sellers, however, quote 8*l.* premium. The Hamstead property is still at 2½ dis., and the shares of the Cannock and Hun- tington Company are in a similar position. The Pelsall Coal and Iron property is at 11 dis. The 10*l.* six per cent. preference shares of the Birmingham Wagon Company have changed hands at 12*l.* 10s.

On Tuesday 60 miners left Bilston for the Bettisfield Colliery, Bagillt, North Wales, where, under a six months' agreement, termi- nable by a fortnight's notice on either side, they are to be found constant employment, good wages, and comfortable cottages free. The eight-hours system prevails. Other men are likely to follow shortly.

In addition to the stoppages that I reported last week I have now to state that Messrs. Bradley and Hawkins' colliery, near Posthouse Bridge, Bilston, has been submerged, and is idle. Messrs. S. Grou- cutt and Sons have finally closed down their Lunt Colliery pits, and the lifts of the water-engine there also are to be drawn up. The two remaining pits at the Moxley Colliery of the same firm are at a standstill. The pumping-engine there, too, is about to be stopped.

In North Staffordshire trade is without improvement. Indeed, several additional mills are likely soon to stop, and the small orders that come in are only on home account. Local pig-iron is in very poor request, and as a consequence much ironstone has not been wanted. Coal for works' and manufacturing purposes is in rather less, than increasing, demand.

The annual meeting of the shareholders of James Hinks and Son (Limited) was held at the offices of the secretary, Colmore row, Bir- mingham. A dividend at the rate of 20 per cent. per annum was declared, and in addition, after providing for depreciation in leases, plant and fixtures, the sum of 5000*l.* was carried to the reserve fund, which now exceeds the paid-up capital of the company.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

May 31.—Little change has occurred in the Iron Trade, but the demand has been well maintained as times go. There are several fair orders in hand, mainly for India, Canada, Brazil, and the Baltic ports. The remarks as to the lowness of prices for finished descrip- tions, made so often in this report, must be reiterated, and it seems now to be extremely difficult to secure an order which will return any profit worth speaking of. The various establishments which have not already been closed in consequence of the depression in trade, continue fairly engaged, and, generally speaking, more iron in its finished state is turned out in Monmouthshire than in the ad- joining county of Glamorganshire, the reason being that many works are closed in the latter county. The demand for iron and steel rails is fairly well maintained, and the latter especially are in good re- quest. The new steelworks at Rhymney are rapidly approaching completion. The foreign demand for bars is almost *nil*. Tin-plates are unaltered. To advert to the coal industry, slight indications of improvement are apparent. It is certain that prices are hardening, and exhibit in some instances an upward tendency, and freights are improving. Of course this may be merely temporary, and it is feared that the present signs do not mean any permanent improve- ment. The demand for steam qualities is well maintained, and house coals are in but moderate and rather less request than of late. Transactions in patent fuel are merely nominal.

As it appears the associated masters are desirous that their men shall work according to the hours of 1869, the representatives of the colliers on the conciliation board have issued an address calling a delegate meeting of miners for the middle of June. The men say that under the award no alteration can be made in the hours of la- bour, but the masters hold a contrary opinion. It has previously been stated that colliery proprietors have been endeavouring to lessen the cost of production chiefly by the reduction of wages. The Aberdare and Plymouth Company issued notices to their employees that contracts would terminate at the end of the present month, the company having worked at a loss. The colliers have had several meetings, and, a ballot being taken, it was resolved by a large ma- jority to continue work at a 10 per cent. reduction. There appears to be no doubt now but that work will be resumed on these terms. The company employ a large number of men. The miners employed by the Llynvi, Tondu, and Ogmore Coal and Iron Company have also resolved to work at a similar reduction. In these times of depression

the men are undoubtedly acting wisely in accepting lower rates of remuneration, as refusal to comply with the masters' terms could have but one ending—enforced idleness. It is also satisfactory to be able to note that the Merthyr Union Assessment Committee have decided upon reducing the valuation of many collieries in their district. The old rateable value in the Merthyr district has been reduced to about a third. With respect to Aberdare, the decrease amounts to 20,000*l.* Small coal is to be assessed at a uniform rate of 3d. per ton.

Yet another colliery accident has occurred in the district. In this case an explosion has occurred at the Deep pit, Nant-y-Glo, the property of the Nant-y-Glo and Blaina Company. Only one man, a fireman, lost his life, but several others were injured by the after-damp. The cause of the explosion appears to rest with the unfortunate man who was killed, and who is believed to have removed the gauze of his safety-lamp.

The workmen employed at the Tynewydd Pit—now famous in the annals of colliery accidents—have presented the manager with an address of sympathy, which must be peculiarly satisfactory to him under the present trying circumstances by which he is surrounded. The following clause from the address will explains the tone which pervades it: "We, therefore, desire to assure you that the occurrence—serious as the consequences have been—has not in the least degree diminished or shaken our confidence in your abilities and care as manager; and we beg, one and all, to assure you that we are now as ready to work under your supervision as we were on the last day before the accident occurred."

REPORT FROM DERBYSHIRE AND YORKSHIRE.

May 31.—Nothing of importance has taken place during the past week with respect to mining operations in Derbyshire. In the lead districts there does not appear to be much doing, despite the large number of mines that have been opened out. With respect to many of them, capital has been the main thing wanting, and the want of it has led to the closing of not a few concerns. The consequence is that production is very far below what it was a few years ago, without any prospect of its increasing. The collieries, on the other hand, have been working very well, considering that we are just entering the month of June, when the consumption of house coal is very moderate. A very fair tonnage, however, has been sent to London from the Clay Cross and other collieries, but prices have undergone no alteration. Steam coal goes off rather more freely, and it is expected that there will be a good demand as the season advances, more especially if the strike of the miners in the Newcastle district should continue for any length of time. The business doing in pig is much as it has been, the consumption in Sheffield and the district being still but moderate. In manufactured a fair amount of business has been doing, considering the general state of the trade throughout the country.

The war has not done anything for the Sheffield trades, but rather the reverse. It is true that one or two houses have had some fair orders for bayonet steel, but there has been less doing in general goods. Some tolerably large orders for Bessemer rails for Russia are being worked off, but it is not expected that others will be given out until the war is ended. Crucible steel is not in much request, nor are the foundries so busy as they have been. In the best quality of table knives a little more is being done for the home markets. Otherwise this department is quiet. Plates and sheets are far from active, and this state of things is not likely to be improved by the lock-out on the Clyde, which also affects file manufacturers and others in the town. In the Rotherham and Nasborough districts there are complaints as to the slackness of trade in more than one branch, and the Parkgate Company—one of the largest in South Yorkshire—in a circular just issued to the shareholders announce that there has been a loss on the year's working, but not so large as might be expected considering the difficulties that had to be contended with.

In the mining districts of South Yorkshire the colliers have been working better than before the holidays, there having been an increase in the tonnage sent to the South. There is also every probability of a brisk shipping season from Grimsby and other of the Humber ports in steam coal for the North of Europe. The only drawback is that the hard or steam and the soft or house coal have to be got at the same time, so that whilst there are markets for the whole of one description the other has to be stacked, and consequently deteriorates by exposure and wet.

The extensive new colliery sunk to the Barnsley seam, which was reached at the depth of 400 yards, near Carlton (Barnsley), is now nearly ready to commence full work. Both shafts are completed, and the conductors have been put in, but at the end of the present week work will be stopped for the purpose of erecting the necessary screens and permanent head gear. This, we understand, will soon be completed, and the colliery will then rank as one of the finest in the district. The head gear will be fitted with a pair of pulley-wheels, each 16 feet in diameter, and the drawing engines, which were at first used for pumping while the shafts were being sunk, have been arranged and fitted with a 16-ft. drum for their future work. They consist of a pair of 36-in. cylinders, with 6-ft. stroke, and reach 100-horse power. Steam is supplied at 50 lbs. pressure, and for greater accuracy and ease in working they are fitted with patent balanced steam port-valves. A large ventilating fan is also being erected, and this, like the engines and the pulley-wheels, is being supplied by Messrs. Davey Brothers, of Sheffield. The cages, which will be double-decked to carry four corves, containing altogether 3 tons of coal, have been made at the colliery works. The company have erected a number of excellent houses, with ample space for gardens at the back, the row forming a street from the pits to the Shafton and Barnsley road. Should trade revive, as we trust it may, we may expect to see quite a transformation in the hitherto quiet village of Carlton, for there will be employment for some hundreds of men, as the output is expected to reach an average of 1000 tons a-day.

At the Dodworth Silkstone Colliery the men recently employed at the Silkstone pit are still out, although the manager has offered to refer the question in dispute to arbitration. At the Stafford Main Colliery they are widening the Silkstone shaft, and have made very great progress so far, so that the work will not occupy the time it was first expected to do. Meetings of colliers are being held in the district, when the men who left the Association some time since have been urged to rejoin it, but this they are not likely to do, considering its present condition, and the chance of having to pay levies.

A COLLIERY MANAGER FINED.—At the Bolton County Police Court, on Thursday, Mr. William Spedding, managing director of the No. 2 Hilton House and Red Moss Colliery, Westhoughton, was charged with a breach of the 20th section of the Coal Mines Regulation Act, in not having provided two shafts to the pit as a means of communication. Defendant pleaded guilty, and explained that the construction of the second shaft had been delayed by a lawsuit—Ridgeway *v.* Hilton House and Red Moss Colliery—which had been in Chancery for nearly two years, and had only just been concluded. Owing to that case they had been prevented deciding upon the mode of making the second communication as required by the Act.—Mr. C. H. Golden, on behalf of the Government Inspector, said defendant might have applied under the 22nd section of the Act for an exemption, but this he had not done. He had repeatedly been cautioned, and at length the Secretary of State ordered the present prosecution. Defendant was fined 20*l.* and costs.

BORING FOR COAL IN SWITZERLAND.—A remarkable example of rapidity in deep boring has recently been furnished by the first borehole put down by a company formed to search for coal in Switzerland. A depth of 1422 ft. was reached in two months, including the reboring of the upper 640 ft. from 3½ in. to 7 in. in diameter. The work was done, including all delays, at a rate of over 1000 ft. per month, the highest speed being nearly 77 ft. in 24 hours. The results obtained were negative, the section showing about 1200 ft. of Permian strata resting upon old crystalline rocks; but the trial is only the first of a series.

GEOLOGICAL SOCIETY OF LONDON.

May 23.—Prof. P. MARTIN DUNCAN, M.B., F.R.S. (President), in the chair.

Richard George Coke, civil and mining engineer, Tapton Grove, Chesterfield; Robert Slater, Lansdowne-place, Blackheath; and William Swanston, King-street, Belfast, were elected Fellows of the Society.——George Alexander Gibson, M.B., D.Sc., Lauder-road, Grange Edinburgh; Henry P. Gurney, M.A., Clerk, Fellow of Clare College, Cambridge; John Higson, mining engineer, Albert-square, Manchester; Francis Stevenson, M.Inst.C.E., Chief Assistant Engineer, London and North-Western Railway, Euston Station, were proposed as Fellows of the Society.——The Rev. Charles Leach, Vincent-street, Birmingham; William May, of Orpington House, Kent; John W. Myers, Westbury-road, Westbourne-square; and John Fletcher Pagen, mining engineer, Chapel Heys, Bodmin, Cornwall, will be balloted for as Fellows of the Society.

The following communications were read:—1. "Remarks on the Coal-bearing deposits near Erekli, the ancient Heraclea, Pontus-Brithynia," by Rear-Admiral T. A. B. Spratt, C.B., F.R.S., F.G.S. —2. "On the Structure and Affinities of the Genus Siphonia," by W. J. Sollas, B.A., F.G.S.—3. "On the Serpentine and Associated Rocks of the Lizard District," by Rev. T. G. Bonney, M.A., F.G.S., Fellow and late Tutor of St. John's College, Cambridge.—4. "On Certain Ancient Devitrified Pitchstones and Perlites from the Lower Silurian District of Shropshire," by S. Allport, F.G.S.

INSTITUTION OF CIVIL ENGINEERS.—The annual Conversazione of the President of this Institution, Mr. G. R. Stephenson, and Mrs. Stephenson, was held at the South Kensington Museum on Thursday evening, and was very numerously attended. There were only two or three exhibits, but these were especially attractive from their extraordinary character. One was for rendering portable, transporting, and re-erecting Cleopatra's needles—the invention, no doubt, being suggested by the interest now taken in the celebrated monolith to be erected in London; the other was Mr. Upward's Miners' Life Preserver, manufactured by Messrs. May and Mountain, of Birmingham. This invention was suggested by the recent extraordinary—indeed, almost unheard of—accident at Tynewydd pit. Mr. Upward states that the apparatus is designed for the purpose of relieving persons who may be accidentally imprisoned in mines; for extricating such persons; and for safely boring through coal, rock, or any other materials in advance of the miners' workings; for ascertaining the condition of the said advanced workings; and for warning miners of approaching danger; and having full command over such danger. He claims that the arrangement admits of the performance of such work, and at the same time prevents the escape of compressed air and such fatal consequences as occurred in the recent accident in South Wales. He suggests one apparatus for passing food, written communications visible in the dark, and any other necessaries for the preservation of life. There is a piece of timber fixed into the roof and floor of the mine, and to this is fixed the struts, with which the apparatus is firmly held to the face of the coal. There is a chamber above the slide valve in which is placed the vessel for passing food, &c., to the imprisoned miners. A pressure gauge is provided, and there is a slide valve which can be opened and closed at pleasure, and gives the operator full command over any compressed air, gas, or water that may be confined in the mine. A packing is used between the flange of the apparatus and the face of the coal. Mr. Upward further provides a vessel for containing liquid, food, or other necessaries, which is made a little less than the main chamber. A rod passes through a stuffing-box, and by this the food vessel is pushed forward to the imprisoned miners after opening the slide valve. An apparatus of larger dimensions, but similar in other respects, is to be used for the deliverance of entombed miners. The main man-tube, which replaces the food chamber above the slide valve, is made sufficiently large to admit of the vessel being drawn into it. In this the entombed miner is placed; the valve is then to be closed, the chamber removed, and the miner is then delivered from his imprisonment. Mr. Upward also proposes a much smaller apparatus with telescophic screw for pressing the boring apparatus forward, and which is intended to be used to ascertain the state of the mine as regards approaching danger, such as detecting old flooded workings, or confined gases. It is similar in all other respects to those previously described. There can be no question when inundations of collieries become more common, and provided such collieries were arranged that such colliers may always be enclosed in compressed air at such points as could readily be reached by driving from another level or working place, the apparatus might come largely into use, especially as the imprisoned collier could not fail to appreciate the convenient mode of conveyance; although he is only provided with about a 20 in. way, he is to be drawn through in a short portion of a gas main whilst comfortably lying on his back with his arms crossed instead of risking the unnecessary abrasion of his hands and knees by passing through in the usual manner. The exhibitor was asked by a mining engineer present whether the smaller apparatus would facilitate letting down the water found to be in advance of a heading, but stated that his invention had no connection with that kind of work. The proceedings of the Conversazione were enlivened by an excellent selection of music, performed by the string band of the Royal Engineers.

THE COPPER TRADE.

Stocks in Europe:—	Tons.	
Chili ores and regulus, Liverpool & Swansea (equal to fine).	3,9 0	
Chili bars in Liverpool	8,991	
Ditto Swansea	2,586	
Chili ingots in Liverpool	—	
Ditto Swansea	—	
Foreign copper (chiefly Australian) in London	3,766	
Ditto ditto ditto now landing	915	
English copper in London	50	
Chili oars and Barilla in Havre	8,735	
Other copper in Havre	425	= 29,418
Afloat and chartered from Chili to Europe (advised by mail):—		
Ores and regulus (equal to fine)	3,314	
Bars and ingots	2,584*	= 6,898
Afloat from Australia (advised by mail):—		
Fine copper		1,081
Afloat and chartered from Chili to Europe (advised by cable):—		
Fine copper		4,100
Total	Tons	41,497

Total shipments of Lake Superior Copper to Europe from Jan. 1 to May 18:—Havre, 1075 tons; Hamburg, 150; Rotterdam, 100; and Liverpool, 50 tons. Estimated stocks of Lake Superior copper in Havre, Hamburg, Rotterdam, and Liverpool, 1250.

* Of this quantity, 750 tons bars shipped to the United States are intended for transhipment to England.—*Leadenhall-street, June* 1.

HENRY R. MERTON AND CO.

THE TIN TRADE.

	April 30, 1877.	May 31, 1877.	May 31, 1876.	May 31, 1875.
Straits and Australian, spot...Tons	8,825	8,311	6,949	5,3 5
Ditto, landing	814	1,211	510	541
Straits afloat	329	328	500	602
Australian, afloat	2,360	2,558	1,500	1,217
Banca, on warrants	900	1,474	1,375	962
Ditto, Trading Co.'s hands.	830	221	1,144	2,333
Ditto, afloat (by sailing vessels only)	74	761	375	716
Billiton, spot	1,128	1,143	987	788
Ditto, afloat	1,030	900	1,000	900
Australian tin in Holland	700	700	—	—
Total ...Tons	18,511	17,367	14,651	13,384
Deliveries during the month in				
London	713	1,099	1,099	1,127
Ditto, Holland	783	345	324	785
Total ...Tons	1,496	1,484*	1,353	1,912
Prices of Straits	£99	£99	£74	£83

* Also 573 tons over-side to America.

Shipments from Straits, in May ...Tons 110
Ditto, Australia, ditto ... 1095

	12 months ending May 31, 1877.	During first 5 months, '77.	During first 5 months, '76.
Shipments from Straits to London ..Tons	4,951	1,650	2,716
Shipments from Australia to London ...	7,848	2,776	2,773
Deliveries of foreign tin in London ...	9,762	4,099	5,334

London, May 31. A. STRAUSS AND CO.

Messrs. EBELING AND HAVELAAR (Rotterdam, May 31).—Business in TIN has again been limited. A firmer feeling pervaded the market in the early part of the month, prices advancing 1 fl., and a few speculative purchases were made at the enhanced figures. The market has since become devoid of animation, the advance has been totally lost, and we have to report a dull tone at the close. The supply in first hands, more especially in London, is very large, and if it were not for the scarcity of holders and the low prices already ruling, a further decline might be safely prophesied. The Dutch Trading Company's third sale in 1877 took place yesterday, when the 22,440 slabs were sold from 42¾ fl. to 42½ fl., average 42½ fl. The next sale will be held towards the end of July.——BANCA has been very sparingly offered. At one time the price advanced to 43¾ fl., but 43 fl. has since been taken. Contracts for delivery ex May sale changed hands from 43½ fl. to 42¾ fl. Since the sale there are buyers at 42¼ fl.——The price for BILLITON advanced from 41¼ fl. to 42½ fl., only small sales being reported at the latter figure. The advance brought out many sellers, and we now quote 41¼ fl. There are no buyers above 41¼ fl. On June 11 a public sale, comprising 10,000 peculs, will take place at Batavia. According to an official statement the production of Billiton for 1876 7 (from May 1, 1876, until the end of April, 1877) amounts to 59,532 peculs, against 62,000 in 1875 6, 63,000 in 1874-5, and 51,000 in 1873 4. The position of Banca the Dutch Trading Company, was—

		1877.		1876.	
Import in May	Slabs	2,904	.....	8,549	.....
Total five months		52,983	.....	29,488	.....
Deliveries in May		6,200	.....	4,700	.....
Total five months		53,889	.....	32,757	.....
Stock second-hand		4,940	.....	44,018	.....
Unsold stock		7,025	.....	44,608	.....
Total stock		52,965	.....	88,624	.....
Afloat	Peculs	8,975	.....	6,000	.....
Statement of Billiton:—					
Import in May	Slabs	6,478	.....	—	.....
Total five months		38,845	.....	35,579	.....
Deliveries in May		6,098	.....	8,179	.....
Total five months		32,822	.....	26,382	.....
Stock		36,612	.....	26,876	.....
Afloat	Peculs	12,000	.....	15,000	.....
Quotation { Banca		42½ fl.		45½ fl.	
May 31 { Billiton		41½	.....	44	.....

These combined returns of Banca and Billiton for 1877, compared with those for 1876, exhibit—An increase of the import for May of 28 tons; an increase of the import for the five months of 836 tons; a decrease of the deliveries for the month of 18 tons; an increase of the deliveries for the five months of 550 tons; an increase of the stock second hand of 303 tons; a decrease of the unsold stock of 1100 tons; a decrease of the total stock of 871 tons: a decline of the quotation of Banca of 3*l.* per ton. The Government returns for the month of March are:—

EXPORT OF TIN FROM HOLLAND.

	March.			Three months.		
	1877.	1876.	1875.	1877.	1876.	1875.
Germany .....Tons	223	247	386	766	753	922
England	55	—	81	106	8	92
Belgium	138	85	176	489	337	107
France	52	12	24	139	61	85
Hamburg	36	27	42	117	110	82
United States	19	—	—	55	15	28
Other countries	16	5	21	27	11	46
Total	539	376	730	1699	1295	1362

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week this market has again been inactive. The settlement for end of May account is in progress; Monday was settling-day, and particulars of the business done will be found below; to-day is pay-day. The new account for settlement, June 11, opened on Tuesday; Monday, June 11, will be next contango day. In shares of iron and coal concerns, the only improvement for the week is on Fife Coal, of 10s. per share, while Glasgow Port Washington (pre-paid) have declined 10s., ditto (ordinary) 3s., Benhar and Scottish Australian 2s. 6d. each, Marbella, also Omoa and Cleland, 6d. each. Cairnhill and Scottish Australian (new) are unaltered. Beverley are at 14s. dis. Bilbao, 19½. Bolckow, Vaughan, B, 34. Cardiff and Swansea (9*l.* paid), 37s. 6d. Chapel House, 50s. to 70s.; Great Western, 75s.; Henry Briggs, Son, and Co., A, 14; do., B, 8; Nant-y-Glo and Blaina (deferred), 60s. Newport Abercarn, 57s. 6d. Nixon's (pref.), 70s. North of England Industrial, A, 71s. Oakham, 6s. Pelaw, 80s. Scottish Australian, 35s. Sheepbridge, 90s. dis. Southwaram, 10s. Tredegar, A, 16. West Cumberland, 7½. West Mostyn (deferred) 5. Whitwick 6 per cent. (pref.), 10½. Workington Hematite Malleable Iron, 15 to 16½. In shares of foreign copper concerns, Cape mark a further decline of 2s. per share, Tharsis (new) 5s., and ditto (10*l.* paid) 2s. 6d. A call of 10s. per share was due Feb. last, of 5s. on May 1, and other 5s. will be due on Sept. 1 on the 40s. paid-up shares of the Canadian Copper and Sulphur Company, thus making them 8s. fully paid. Huntington are firmer, at 26s. to 28s. New Quebrada been done at 4½, now 3½ buyers. Yorke Peninsula (ordinary), 4s. to 5s.

In shares of homes mines Glasgow Caradon are 6d. higher. Mayne Iron Ore sold at 41s. and 43s. 9d. Talyhont offered. Aberdaunant are at 11s. 3d. to 13s. 9d. Bampfylde, 6s. to 8s. Cargoll, 70s. to 80s. Carn Brea, 38; Clemmitton, 4 to 5; Commartin, 7s. 6d.; D'Eresby, 18; Dolcoath 34; Great Laxey, 20½; Killifreth, 10s. to 15s. (call paid); Leadhills, 6; Llangan, 7; Marke Valley, 12s. 6d.; Mount Gorddu, 80s.; Parys Mountain, 8s.; Pennant, 5½; Pennerley, 7s. 6d. to 10s.; Penstruthal, 8s. to 10s.; Prince of Wales, 6d. to 1s. 6d.; Red Rock, 45s.; Rhosmon, 62s. 6d.; St. Patrick, 25s.; South Condurrow, 8½; Tincroft, 16½; West Maria, 3½; West Tankerville, 15s. to 20s.; West Tolgus, 6½; Wheal Agar, 60s. to 70s. In shares of gold and silver mines Richmond Consols proved 3s. 9d. Almada and Tirito are at 5s. 6d. Antiquia, 1s. to 1s. 3d.; Bonanza Mountain, 20s. to 45s.; Emma, 1s. 3d.; Exchequer, 5s. 9d. to 11s. 3d.; Santa Martino, 45s. to 50s.; Last Chance, 10s.; Pestarena United (Gold) 2s. 6d. to 3s. St. John del Rey, 310; South Aurora, 2s. 6d. to 5s.

In shares of oil concerns, Young's Paraffin have advanced 12s. 6d., and Uphall 3s. 9d. There is a reduction of 6d. on Oakbank (new). A dividend of 7s. 6d. per share is payable on Uphall on June 30, and of 2s. 6d. per share on Oakbank on July 13. In shares of miscellaneous companies there are not any changes. Lochs and Glasgow Engineering, &c., remain at 2s. to 2s. 6d. Bridgefield and Victoria 5s. are at 5. Earle's Shipbuilding, 10¼, buyers. Hopkins, Gilkes, and Co., 5¼ to 5½ for old and new shares. Palmer's, B. 9½. Phosphate Guano done at 11½, sellers over. In shares of chemical companies, Belle are 15; Langlade's, 7s. 3d.; Lucas, 6½; and Newcastle, 57s. 6d.

J. GRANT MACLEAN, Stock and Share Broker.

Post Office Buildings, Stirling, May 31.

FOREIGN MINES.

BURRA BURRA MINES (South Australia).—Capt. Saunders, March 31: During the past four weeks the bearers and cistern have been fixed in the 45 fm. Morphett's, a 14 in. and an 11 in. lift fixed in the same to pump the water to the 70, and the shaft sunk about 9 ft. All preliminary work and fixtures now being completed we shall make good progress in sinking the shaft to the 100, as the men are working with a will. The 85 south, on Sanders's lode, has been extended about 4 fathoms; the first 2 fathoms the lode was poor. We then drove a cross-cut west to the footwall (lode 11 ft. wide), but found it poor there also. We then resumed driving south against the hanging wall, and I am pleased to state the lode has improved, so that it is now as productive as I have seen it at any time in this level, the ore being grey, purple, and yellow sulphurets, saving the whole for the stamps. In the 85 north, on same lode, we met with a cross-course running obliquely across the lode, which disordered the lode, and let out strong feeds of water, so that I thought it most advisable to suspend it for awhile, and resume driving the 85 north, on Kingston's lode, 8 or 10 fms., so as to get at the point where we expect to meet the shoot of ore passed through in and stoped away at the roof of the 70, and then cross cut to Sanders's lode. Waterhouse's shaft is down about 5 fms. below the 60. About 3½ fms. more will bring us down to the 70, which we hope to see accomplished in three or four weeks. The cross-cut driving west of Peacock's air shaft is not yet through the lode, still yielding grey, purple, and yellow ores, saving the stuff for stamps; the lode here is from 2 ft. to 20 ft. wide, spotted with ore throughout. Although not rich it is very promising, and as soon as Waterhouse's shaft is holed to the 70 fm. level we should push on the 70 fm. level north, from Waterhouse's, at once to prove this ground 10 fms. deep. The distance between the two shafts is 40 fms. Graves' engine-shaft has been sunk 2 fms.; now down 4 fms. below the 50; this shaft will be pushed on with all possible dispatch, so as to receive the pitwork for the relief of Morphett's engine—Old Mine: The tribute pitches and open work are much as usual, everything being pushed on as fast as possible. The engines and machinery are in good order, and working well.

NEW ZEALAND KAPANGA.—J. Thomas, April 9: Since my last the following additional underground work has been done during the past four weeks, ending 7th inst. The winze sinking on the course of the lode under the 50, is now down as follows—sunk through old stopes, 3 fms.; sunk in new ground 7 fms. 3ft.; total, 10 fms. 3 ft. During the past 2 fms. sinking of this month the lode was squeezed from 6 in. to 10 in. wide, occasionally showing visible gold. The squeeze was occasioned by the footwall changing to a hard band, or head, of killas stone. After sinking through this hard band of country, we got into the usual soft and kindly killas formation again, where the lode assumes its usual composition, regularity, and size of 16 in. to 20 in. wide, composed principally of rubbly quartz, and quantities of fine black mundic in the flookan seam, which always accompanies the hard regular hanging wall. We have obtained a few pounds of specimens all through the lode sinking, but they were not so rich where the squeeze occurred as they are found where the lode is in a softer country. The winze being sunk the required depth of 10 fms. below the No. 5 level, I commenced at once to drive north and south to open up ground for stoping, where I expect to meet with good gold-bearing ground. The No. 5 level has been driven a further distance of 6 fms. on the course of the lode towards the Albion shoot; the total length now driven north of the winze is 19 fms. 4 ft. The lode here maintains its usual regularity and size of 20 in. wide, and consists of branches of compact quartz, intermixed with the flookan and fine mundic, which contains a little fine gold; no gold being visible at present, this end is driving by contract at 6*l.* per fathom. The lodestuff from the winze and end is carefully saved for crushing; there are 70 to 80 tons of of general stuff in the stamps-shed, and 20 lbs. of specimens in the safe, which I estimate will yield 1 oz. gold per 1 lb. of stone. The stamps will commence crushing the above quartz next week. The machinery underground and at surface, after receiving occasional necessary repairs, is in good order, and working well.

CEDAR CREEK.—J. B. Ludlum, May 4: Since my last we have had warm weather, which has the effect of melting the snow in the mountains, and thus shorten the season. I am pleased now, however, to report that the weather has changed, and is cold again, which is favourable for prolonging our water supply. Our upper or main ditch is conveying its full capacity, and I am utilizing the water where it promises the largest profit. In the various claims I am crowding the work all that is possible. The Baker, and Star and Union, we cleaned up on the 30th ult., as far down as the mouth of the tunnel. I did not think it policy to clean up the outside sluices or under currents, consequently we omitted them. In the Baker claim, as you have been heretofore informed, we have not yet been enabled to wash any bottom gravel. The last two blasts which we exploded were in solid undrifted banks, but up to the time of cleaning up we could only wash the top of the gravel loosened thereby. I am not yet in receipt of the Mint certificate. In Pacific claim we are washing off a point of promising gravel. The Central claim is idle, as we have other use for the water. The Gold Run claim, as before reported, is exhausted on present level. Our last clean-up netted (as our portion of the profit) $7269 5. We have sold the right to take up and clean up under the old sluices for $350, of which our portion is $16?5. This, with the exception of what we may realise from the sale of the old lumber and blocks, is all that we shall receive from this claim till we are enabled to reach the bottom through a deep bed-rock tunnel. This we may be enabled to do through the one that the Miners' Ditch Company is now driving. Our water customers continue using water as last reported. They were not enabled to run as constantly, however, last month as the month previously, consequently the amount of sales does not aggregate as large.

MINING SHARES WANTED.

AN AMERICAN CAPITALIST, largely interested in the METAL TRADE, is wishful to PURCHASE large or small quantities of SHARES in good productive WELSH LEAD MINES. Those that are selling ore, or that can soon commence to make sales, preferred.

Parties having such to dispose of can find an immediate cash buyer, provided their demands are fixed at a moderate price, on stating full particulars to "CAPITALIST," care of Messrs. Straker Brothers and Co., Camomile-street, London.

TO MINING AGENTS, AND OTHERS.—An Independent Gentleman is in possession of FOURTEEN OFFICIAL UNITED RAILWAY SHAREHOLDERS' LISTS, comprising the principal companies in "U. K." (all dated December, 1876). Any of the above can be had, specially adapted for Distributing Circulars, Reports, &c.

Address, "Shareholder," at C. H. May and Co.'s General Advertising Offices, 78, Gracechurch-street, E.C.

TO INVESTORS, &c.—The Proprietor of a PATENT for IMPROVED ROADWAYS wishes to MEET with a Party, the object being to FORM a PUBLIC COMPANY.

For particulars, apply by letter, addressed "Office," 178, Gresham House, Old Broad-street, E.C.

YORKSHIRE LEAD MINES.

FULL PARTICULARS of the PRESENT and FUTURE PROSPECTS of the YORKSHRE LEAD MINES may be obtained on application to "A. B.," Post Office, Pateley Bridge, Yorkshire.

THE ASSOCIATION OF THE ENGINEERS FELLOWS OF THE MINING SCHOOL OF LIEGE, have resolved to VISIT in August, SEVERAL COLLIERIES in the district of the WEST OF MONS, and among others those of the LEVANT DU FLENU, where powerful AIR COMPRESSING ENGINES are being installed

On this occasion the Society of the Levant du Flénu will put at the disposal of the inventors and constructors the means of experimenting any mechanical apparatus moved by compressed air, and intended to work in the interior of mines. The experiments will take place in presence of the Association, who will delegate a commission to draw up an official report, to be inserted in the Annals of the Association.

Apply for all references to Mr. F. L. CORNET, Engineer-Director of Works, at the Society of the Levant du Flénu, at Cuesmes, near Mons, Belgium.

HOLMBUSH AND WHEAL NEWTON.—SHARES in these RICH DIVIDEND-PAYING MINES may be BOUGHT or SOLD on application to S. BOOME, of 150, Palmerston Buildings, Bishopsgate-street, London, E.C., who will supply full information to intending investors.

NOUVELLE MONTAGNE COMPANY.—The DIVIDEND for the year 1876 will be PAYABLE—

On the 30th June next, FIFTY FRANCS per whole share, in exchange for coupon No. 24, and TEN FRANCS per fifth of share, coupon No. 41.

On the 31st December next, EIGHTY FRANCS per whole share, in exchange for coupon No. 25, and SIXTEEN FRANCS per fifth of share, coupon No. 42.

The coupons for encashment to be presented to Messrs. C. DEVAUX and Co., 19, King William-street, E.C., London.

Le Directeur Général de la Société,
V. BOUHY.

Liege, 1st May, 1877.

THE ANGLO-AUSTRALIAN GOLD MINING COMPANY (LIMITED).

Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the Anglo-Australian Gold Mining Company (Limited) will be HELD at the office of the said company, No. 8, Austinfriars, in the City of London, on MONDAY, the 4th day of June, 1877, at Two o'clock P.M. precisely, for the purpose of passing the following special resolution:—

"That the Anglo Australian Gold Mining Company (Limited) be wound-up voluntarily."

By order, J. H. MURCHISON,
8, Austinfriars, London, May 18th, 1877. London Manager and Secretary.

MONTGIBAUD SILVER-LEAD MINING AND SMELTING COMPANY.

Notice is hereby given, that an "A COMPTE," or INSTALMENT of TWENTY FRANCS PER SHARE, on account of the DIVIDEND for the year 1876-1877, is to be PAID on the 5th day of June next. This "a compte" will be paid at the office of the company, No. 15, Rue de Châteaudun, Paris, or at the London Agency, No. 6, Queen street-place, on presentation of the share certificates with the sixteenth coupon not detached, which will be stamped. The payments in London will, after allowing for exchange, be at the rate of 15s. 10d. per coupon, free of income tax.

JOHN TAYLOR AND SONS.

London Agency, 6, Queen street-place, E.C., 29th May, 1877.

THE LONDON GENERAL STEAM TUG LIGHTERAGE AND TRANSIT COMPANY (LIMITED).

A GENERAL MEETING of the Shareholders of the above Company will be HELD at No. 11, King William street, City, on FRIDAY, 8th day of June, 1877, at Two o'clock.

By Order, EDWIN MILLER, Secretary.

11, King William-street, London, 31st May, 1877.

GLASGOW AND THE HIGHLANDS.

ROYAL ROUTE VIA CRINAN AND CALEDONIAN CANALS, by ROYAL MAIL STEAMER, "IONA," DAILY, at Seven A.M., and from GREENOCK, at Nine A.M.

See bill, with map and tourist fares, free, at Messrs. CHATTO and WINDUS, Publishers, 74, Piccadilly, London; or by post from DAVID HUTCHESON and Co., 9, Hope street, Glasgow.

CENTENARY MEETING OF THE BATH AND WEST OF ENGLAND SOCIETY,
JUNE 4 TO 8. STAND 90—SHED 3.

AMBORNE MEETING OF THE ROYAL CORNWALL SOCIETY,
JUNE 12 TO 16.

H. R. MARSDEN WILL EXHIBIT IN FULL OPERATION "BLAKE'S" PATENT STONE BREAKERS.

All parties interested are invited to send their own material to be operated upon.

ADVERTISING.

C. H. MAY AND CO.,
GENERAL ADVERTISING OFFICES,
78, GRACECHURCH STREET, LONDON, E.C.
ESTABLISHED 1846.

ADVERTISEMENTS received for insertion in all NEWSPAPERS, &c.

W. F. LOWE, F.C.S.,
Associate of the Royal School of Mines,
ASSAYER AND ANALYTICAL CHEMIST.

ASSAYS AND ANALYSES MADE OF ORES, FIRE CLAYS, LIMESTONES, &c.

ADDRESS,—ASSAY OFFICE, CHESTER.

THE
BRYN ALYN LEAD MINING COMPANY, LIMITED.
Capital £20,000, in 2000 Shares of £10 each.

ISSUE OF UNALLOTTED SHARES.

Payable as follows:—£1 on application and £1 on allotment: the remainder only as required, and at not less intervals than two months, nor in larger amounts than £2 per share.

The success which has attended the development of this lead mine is so satisfactory to the directors that they have decided to offer to the public a few of the unallotted shares of the company at par, in order to increase the working capital, so as to vigorously extend and enlarge the operations, also to fix new machinery to expedite the development of the mine, and increase the returns of ore.

The directors feel confident that the produce of the mine will continue to increase with its development, as it hitherto has done, and make good profits to the shareholders.

Capt. Clemence reports that the lead ground has considerably improved, the lode in the 100 level being worth fully 2 tons of ore per fathom in the bottom. The stopes over the 60 level are worth 1 ton of ore per fathom, and the 80 level yielding good paying lead stuff.

For particulars and Forms of Applications for Shares, address—Secretary, Bryn Alyn Lead Mining Company (Limited), 15, Bridge-street, Bradford.

MESSRS. THORNYCROFT AND CO.
FINANCIAL AGENTS AND SHARE BROKERS,
51, SOUTH JOHN STREET, LIVERPOOL.

MR. J. S. MERRY,
ASSAYER AND ANALYTICAL CHEMIST,
SWANSEA.

NORTH STAFFORDSHIRE RAILWAY.

THE DIRECTORS OF THIS COMPANY are prepared to RECEIVE TENDERS for the SUPPLY of LOCOMOTIVE COAL, delivered at Derby, or any Station or Siding on the North Staffordshire Railway, in trucks to be provided by the company, in quantities of from TWO HUNDRED to THREE HUNDRED TONS PER WEEK for Twelve Months, commencing July 2nd next.

Tenders, marked "Tenders for Coal," to be addressed to the Secretary, on or before Thursday, the 14th June next.

The Directors do not engage to accept the lowest or any Tender.

By order, PERCY MORRIS, Secretary.

Stoke-upon-Trent, 31st May, 1877.

THAT VALUABLE LEAD MINE, EDGE RAKE, and PLANT, in full working order (if not disposed of before, and notice given), TO BE SOLD, BY AUCTION, by Mr. PHILLIP HEATON FLINT, on July 2nd, 1877, at the Mine, near TIDESWELL, DERBYSHIRE, two miles from Millendale Station, Midland Railway.

All that EXTENSIVE MINERAL GROUND and MINE, with 12-horse horizontal ENGINE and BOILER, drum, ropes, pulleys, head stocks, ladders, ore crusher, horse gin, and all requisites for getting, drawing, and dressing lead ore—all in first-class condition. If not disposed of as a whole, the Directors will OFFER THE PLANT IN SEPARATE LOTS.

For particulars, apply to Mr. THOMAS EYRE, Castleton, Derbyshire; or to Mr. C. R. GREGORY, Millendale, near Buxton, Derbyshire.

MINING CONCERN TO BE SOLD.

A VALUABLE COPPER AND SILVER MINE, well situate in GERMANY, is to be DISPOSED OF (immediately) BY PRIVATE CONTRACT. Price £25,000, the greatest part of which can remain on mortgage. Actual owner, being old and childless, wishes to retire.

Particulars and prospectus sent on application to Rudolf Mosse's Advertising Agency, 1, Old Change, London, E.C.

SLATE QUARRY IN WALES.

FOR SALE, BY PRIVATE BARGAIN, the NORTHERN WELSH SLATE COMPANY'S QUARRY, "CHWAREL FAWR," situated near CARNARVON, in the centre of the BANGOR SLATE RANGE, at present in full operation, producing excellent slates, and comprising ONE HUNDRED AND TWENTY FOUR ACRES, leased from the Crown at a moderate royalty.

For particulars, apply to MOORE and BROWN, C.A., No. 166, St. Vincent-street, Glasgow.

TO CAPITALISTS, AND OTHERS.

FOR SALE, A SLATE QUARRY, IN CORNWALL.—REPORT of the above by Capt. MOORE, for thirty-five years Captain and Manager of the Delabole Quarry, Cornwall:—

SIR,—At your request I have inspected the quarry, and find it still continues to improve as it deepens. The slate and slab blocks will be found to increase in size, and improve both in quality and quantity, the beds will be more solid and a better colour than those so near the surface. Never in all my experience as a quarry manager have I seen so much slate made out of so small a space, and so near the surface, as at your quarry. There is an abundance of slate rock of any size, both for slates and slabs. The splitting qualities of it are not to be surpassed by any in the country. I venture to say that such an investment for capital rarely offers itself as this. I am, yours truly, THOMAS MOORE.

For further particulars, apply to "H. S.," care of Mr. W. E. Franklin, News Agent, Newcastle on Tyne.

FOR SALE, and now lying at Minsterley Railway Station, ten miles from Shrewsbury, the following SUITABLE PITWORK, for 20 fms. 16 in. PLUNGER LIFT:—

ONE 16 in. PLUNGER POLE, 13 ft. long, new.
ONE 16 in. H PIECE, in two parts, with door, stopper, seats, and valves, new.
ONE 16 in. DOOR PIECE and door, seats, and valves.
ONE 16 in. flat-bottom WINDBORE.
ONE 17 in. POLE CASE, 10 ft. long.
ONE 16 in. STUFFING BOX and GLAND, bored.
SIX 16 in. PUMPS, 9 ft. long, new.
FOUR 16 in. PUMPS, 9 ft. long, second-hand.
TWO 16 in. MATCHING PIECES, 6 ft. long.
Together, about 19 tons.
Also, a quantity of STAPLES and GLANDS, FLANCH and other BOLTS.
Together, about 1 ton 10 cwts.

To view same apply to Capt. HARRIS, Minsterley; and for further particulars to W. J. LAVINGTON, Esq., 14A, Austinfriars, London.

FOR SALE,—TWO IRON MINES IN AFRICA, producing probably 200,000 tons of iron ore, of 60 per cent.

Address, "M. N., 233," Messrs. Samuel Deacon and Co.'s, 154, Leadenhall-street, E.C.

FOR SALE, ONE-EIGHTH of one of the most promising SILVER-LEAD MINES. A rare opportunity for profitable investment. Price £40.

Address, "Mine Agent," Post Office, Bettws-y-Coed.

NOTICE TO COLLIERY OWNERS, AND OTHERS.

FOR SALE, EVERY DESCRIPTION of COLLIERY and ENGINEERS' STORES.

Apply to GEORGE RIDLEY, M.E., Grease Manufacturer, Coal Fitter, and Metal Broker, Trinity Chambers, Quayside, Newcastle-on-Tyne.

CANNEL COAL.

THE LEASE OF A SMALL TRACK OF CANNEL COAL TO BE DISPOSED OF, on advantageous terms.

Apply to Messrs. JOHNSON, BARCLAY, and JOHNSON, Solicitors, 36, Waterloo-street, Birmingham.

SILVER-LEAD MINE.

THE SETT contains SEVERAL LODES and ONE or TWO CROSS-COURSES. One of the lodes has been intersected by a shallow level a few yards from surface. It has a most promising appearance, has produced a quantity of silver-lead, and will let on tribute. A very small outlay will intersect this lode about 22 yards below the present workings, and, judging from the present appearance of the lode, ensure large and regular returns of ores.

ADVERTISER will TREAT FOR SALE of WHOLE or PART of the MINE, or with gentlemen in a position to form a company for working the same.

Address, "X.," MINING JOURNAL Office, 26, Fleet-street, London.

NEATH, SOUTH WALES.

THE PRACTICE of a deceased MINING ENGINEER, for many years resident and practising in this Town, in the centre of the Colliery District, is FOR SALE.

For particulars, and to treat, apply to "K. J.," The Museum, Neath.

Neath, 17th May, 1877.

VERY VALUABLE MINES—SOUTH-WEST OF IRELAND.

EXTENSIVE AND RICH MINES OF SILVER-LEAD, BLENDE, COPPER, &c., which require only to be drained of water in order to make immediate returns of ore. Any amount of machinery may be driven by water-power.

Capitalists will find this a safe and profitable investment; and reliable information may be obtained on application to Capt. W. THOMAS, who has had nearly 40 years' experience in the management of Mines in Ireland.

Cappagh Mine, Ballydehob, Co. Cork, May 28th, 1877.

PUMPING ENGINE FOR SALE,—In excellent condition. Inverted cylinder 60 inches diameter, 9 feet stroke. Cornish valves. Cataract. Wrought-iron main beam and cast iron balance beam.

Apply, H. BRAMALL and Co., St. Helens, Lancashire.

FOR SALE, at NEW PEMBROKE MINE, CORNWALL.—An excellent 80 in. cylinder PUMPING ENGINE, with FOUR good 12 ton BOILERS.

25 in. DRAWING ENGINE, and TWO BOILERS.
TWO SPARE BOILERS.
THREE IRON STAMPS AXLES.
100 fathoms FLAT RODS, 3½ inch.
A quantity of ROD PLATES and other MATERIALS.

Apply to Mr. JOHN POLKINGHORNE, PAR OFFICE, PAR STATION.

FOR SALE, a 18-horse power PORTABLE STEAM ENGINE, with link motion reversing gear, ready for delivery.

A 25-horse power PORTABLE.

An 18-horse power VERTICAL STEAM ENGINE, with link motion reversing gear, also gear to wind and pump.

A 9-ft. PAN MORTAR MILL, VERTICAL ENGINE, and BOILER.

Apply to—
BARROWS AND STEWART, ENGINEERS, BANBURY.

GOLDENHILL COBALT, NICKEL, COLOUR, BORAX, AND CHEMICAL WORKS,
NEAR STOKE-UPON-TRENT, STAFFORDSHIRE
JOHN HENSHALL WILLIAMSON, MANUFACTURER AND REFINER
Purchaser of Borate of Lime and Tincal.

NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS, 16, OOZELL STREET NORTH, BIRMINGHAM.

STEPHEN BARKER begs to inform the Trade that he has the following articles for sale:—

REFINED METALLIC NICKEL.
REFINED METALLIC BISMUTH.
OXIDE OF COBALT.
GERMAN SILVER—IN INGOTS, SHEET, WIRE, &c.
NICKEL AND COBALT ORES PURCHASED.

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF HENRY HALL, ESQ., H.M. INSPECTOR OF MINES.

NOTICE IS HEREBY GIVEN, that an EXAMINATION for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, will be HELD on the 25th day of June next, and CANDIDATES INTENDING TO PRESENT THEMSELVES at such EXAMINATION must, on or before the 20th day of June next, notify such intention to the Secretary of the Board of the above-mentioned District, from whom all information as to particulars can be obtained. By order of the Board,

MASKELL WM. PEACE, Secretary.

N.B.—Persons who do not reside within the District are equally eligible for examination with those who do.

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF THOMAS CADMAN, ESQ., H.M. INSPECTOR OF MINES.

PERSONS desirous of being EXAMINED in this district, for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, should at once COMMUNICATE with the SECRETARY to the BOARD of the ABOVE-MENTIONED DISTRICT, at the following address:—

By order of the Board,
J. Y. THOMAS, Secretary,
Winnalls Hill, near Coleford, Gloucestershire.

N.B.—Persons who do not reside within the District are equally eligible for examination with those who do.

MALLEABLE IRON CASTINGS, Every Description.
W. B. MAPPLEBECK, JUN.,
21 AND 22 LOVEDAY STREET,
BIRMINGHAM.

TWELVE H.P. DOUBLE CYLINDER PATENT "ROBEY" MINING ENGINE, with LOCOMOTIVE BOILER combined, with Gearing, Winding Drum, and Brake, complete, and equal to new, TO BE SOLD, cheap.

For particulars, where to be seen and price, apply to ROBEY and Co., Engineers, Lincoln.

WALTER BUTLER AND CO.,

GENERAL MERCHANTS AND AGENTS
LEITH OFFICES, MOORFIELDS, LIVERPOOL,
PURCHASERS OF
SULPHUR ORES, MANGANESE, AND ALL DESCRIPTIONS OF MINERAL PRODUCE.

WILTON'S MATHEMATICAL INSTRUMENT ESTABLISHMENT, REMOVED from St. Day to A. JEFFERY'S, CAMBORNE.

W. H. WILTON begs to thank his friends for their liberal support for so many years, and informs them that (having opened business at Valparaiso) he has now declined business in England in favour solely of Mr. A. JEFFERY, MATHEMATICAL INSTRUMENT MAKER, CAMBORNE, whom he considers (having been an assistant to his father for several years) is in every way capable of creditably maintaining the good name universally awarded to Wilton's instruments.

A. JEFFERY

Respectfully begs to inform Mine Managers, Surveyors, Engineers, &c., the having purchased Mr. Wilton's business, and the very valuable acquisitions and appliances belonging thereto, he has enlarged his Mathematical Instrument Manufactory, and is prepared to supply THEODOLITES, DIALS, POCKET DIALS, LEVELS, TRAVERSING and PLAIN PROTRACTORS, CASES OF DRAWING INSTRUMENTS, MEASURING CHAINS and TAPES, ASSAYERS' SCALES and WEIGHTS, ENGINE COUNTERS, and, in short, every description of Instruments used in SURVEYING, MEASURING, MAPPING, &c.

Repairing in all its branches promptly attended to.

MEXICO, NEW MEXICO, ARIZONA, UTAH, NEVADA, AND CALIFORNIA.

F. M. F. CAZIN,

MINING AND CIVIL ENGINEER,
At BERNALLILLO, NEW MEXICO, U.S. OF AMERICA,

Has 24 years' experience in Mining and Smelting, and 10 years' experience in American Business and Law, offers his services at moderate charges for Reporting on Mining and other Property in any of the above-named States or Territories; gives correct, safe, and responsible advice as to securing full titles and possession; and, as to best mode of utilising the property, will assist in settling existing difficulties by compromise, and in disposing of developed mining property when held at real value; offers his assistance for securing undeveloped mining properties at home prices. As to care taken in reporting, reference is made to the *Mining Journal* Supplement, April 1, 1876, containing report on property of the Maxwell Land Grant and Railway Company; as to technical standing, to the prominent men of the trade—compare *Mining Journal* of Aug. 30 and Nov. 31, 1872, and *New York Engineer and Mining Journal*, Feb. 28, 1874.

TO MINERS IN NORTH AMERICA.

CHEMICAL LABORATORY AND GENERAL MINING OFFICES,

J. S. Phillips, M.E.
San Francisco.

EXAMINER OF MINES, MINERAL ASSAYER, &c.

Practical Instructions for Testing and Assaying, by Blowpipe, Chemicals, Crucible Scorifier, &c.

Author of the "Explorers', Miners', and Metallurgists' Companion," a practical work of 672 pages, with 81 illustrations. Price, second edition, $10·50.

Inventor of the "WEE PET" Assaying Machine, which obtained a GOLD MEDAL at the San Francisco Mechanics Institute Fair of 1869. Price $100.

Having had Thirty Years' experience (twenty in Cornwall and ten in U.S. America) offers his services to those requiring ADVICE on MINES or MINING, ENGINEERING, ASSAYING, SMELTING, MILLING, and CHEMICAL REDUCTION.

REFERENCES.

In England—The London *Mining Journal*, and leading Cornishmen.
In California—The *Mining and Scientific Press*, and principal Miners & Bankers.

THE NORTH CENTRAL WAGON COMPANY, ROTHERHAM,

HAVE ON HAND A NUMBER of 8 and 10 ton COAL and COKE WAGONS ready for immediate delivery, with side and floor doors, side and end doors, and side doors only, on easy terms, for cash. Purchase, lease, and ordinary hire.

Full particulars may be had upon application to—

JOHN BARRAS, Secretary.

THE BIRMINGHAM WAGON COMPANY (LIMITED)

MANUFACTURE RAILWAY CARRIAGES and WAGONS of EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract. MANUFACTURERS also of IRONWORK, WHEELS, and AXLES.

EDMUND FOWLER, Managing Director.

WAGON WORKS,—SMETHWICK, BIRMINGHAM.

G. HUTCHINSON AND CO.,

FORTH BANKS OIL WORKS,
NEWCASTLE-ON-TYNE,

Beg to draw the attention of COLLIERY OWNERS and ENGINEERS to the Oils prepared by their special process. They never clog nor corrode, but keep the bearings cool and clean, and will be found the best and most ECONOMICAL LUBRICANTS at present in the market, being very DURABLE, UNIFORM IN QUALITY, and CHEAP. Prices, from 2s.

SPECIALLY ADVANTAGEOUS RATES FOR LARGE CONSUMERS.

References to many eminent firms who have used them constantly for years, amongst whom may be mentioned Sir W. Armstrong and Co.; Elswick Engine and Ordnance Works, Newcastle; R. Stephenson and Co., Engineers, Newcastle; R. and W. Hawthorn, Engineers, Newcastle; Hawkes, Crawshay, and Sons, Engineers, Gateshead-on-Tyne; Abbot and Co., Engineers, Gateshead-on-Tyne.

Samples, prices, &c., on application. AGENTS WANTED.

B. & S. MASSEY, OPENSHAW, MANCHESTER.

Prize Medals—Paris, 1867; Havre, 1868; Highland Society, 1870; Liverpool, 1871; Moscow, 1872; Vienna, 1873; Scientific Industry Society, 1875; Leeds, 1875; Paris, 1875; Mancheser and Liverpool Society, 1876; U.S. Centennial, Philadelphia, 1876.

PATENTEES AND MAKERS OF DOUBLE AND SINGLE-ACTING

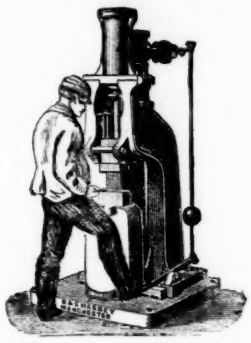
STEAM HAMMERS

Of all sizes, from ½ cwt. to **20 tons**, with self-acting or hand motion, in either case giving a perfectly **DEAD BLOW**, while the former may be worked by hand when desired. **Large Hammers**, with **Improved Framing**, in **Cast** or **Wrought Iron. Small Hammers**, working up to 500 blows per minnte, in some cases being **worked by the Foot** of the Smith, and not requiring any separate Driver.

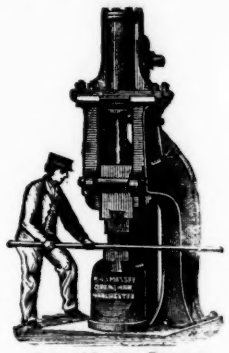
SPECIAL STEAM STAMPS, for Forging, Stamping, Punching, Bolt making, &c.

CIRCULAR SAWS for Hot Iron.

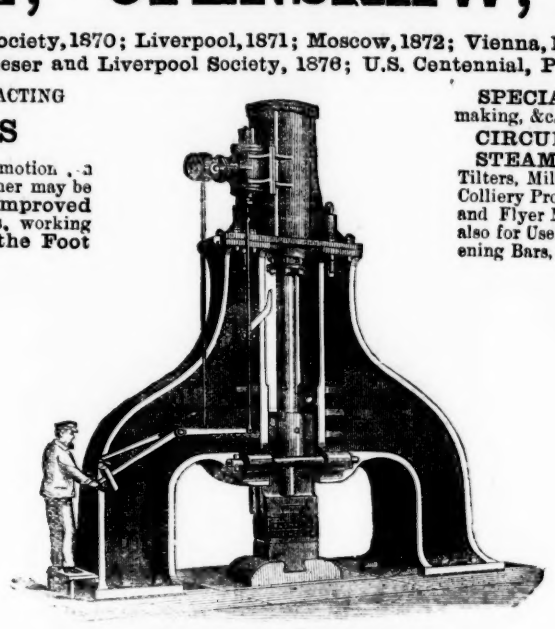
STEAM HAMMERS for Engineers, Machinists, Shipbuilders, Steel Tilters, Millwrights, Coppersmiths, Railway Carriage and Wagon Builders, Colliery Proprietors, Ship Smiths, Bolt Makers, Cutlers, File Makers, Spindle and Flyer Makers, Spade Makers. Locomotive and other Wheel Makers, &c. also for Use in Repairing Smithies of Mills and Works of all kinds; for straightening Bars, bending Cranks breaking Pig-iron, &c.



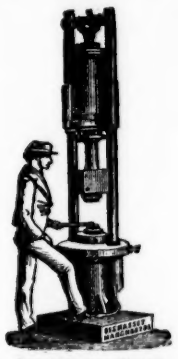
Small Hammer with Foot Motion.



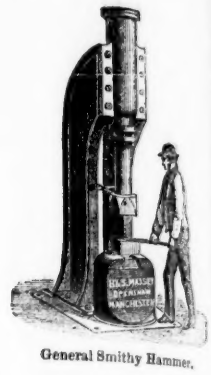
General Smithy Hammer.



Steam Hammer for Heavy Forging.



Special Steam Stamp.



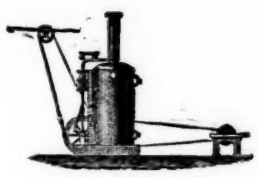
General Smithy Hammer.

From 60 to 100 Steam Hammers and Steam Stamps may usually be seen in construction at the Works.

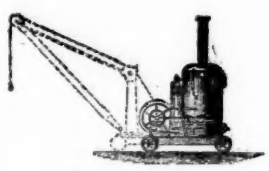
CHAPLIN'S' PATENT PORTABLE STEAM ENGINES AND BOILERS.

(PRIZE MEDAL, INTERNATIONAL EXHIBITION.)

ALWAYS ON STOCK OR IN PROGRESS.



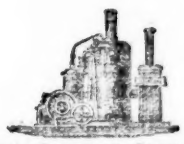
STATIONARY ENGINE.
From 1 to 30-horse power.
No building required.



HOISTING ENGINE.
1 to 30-horse power.
With or without Jib.

STEAM CRANE.
15 cwts. to 20 tons.
For Wharf or Rail.

CONTRACTORS' LOCOMOTIVE.
9 to 27-horse power.
For Steep Inclines and Quick Curves.



SHIPS' ENGINE AND DISTILLER.
For Winding, Cooking, and Distilling.
Sanctioned by H. M. Government.

WINDING AND PUMPING ENGINE.
6 to 20-horse power.

Parties are cautioned against using or purchasing imitations or infringements of these patent manufactures.

PATENTEES AND SOLE MANUFACTURERS,

ALEXANDER CHAPLIN AND CO.,

CRANSTON HILL ENGINE WORKS, GLASGOW.

London House: M'KENDRICK, BALL, AND CO., 63, Queen Victoria-street, London, E.C.

THE "CHAMPION" ROCK BORER

STANDS UNRIVALLED

For Tunnels, Mines, Quarries, Harbour Works, Cutting Blocks of Granite, &c.

The working parts are made of the toughest steel and phosphor-bronze—steel castings are also used—so as to combine strength with light weight.

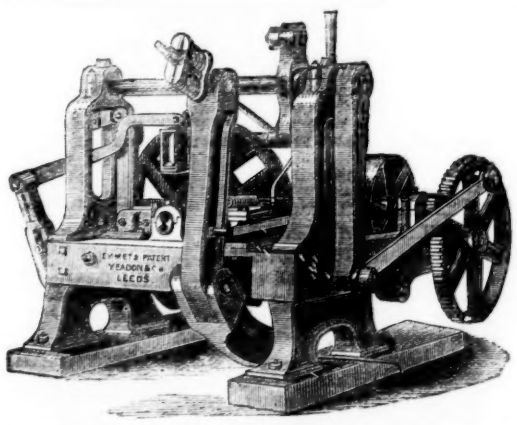
AIR-COMPRESSING MACHINERY

Of the simplest and best construction.

Combined Water-pressure Engines and Air-compressors,

Giving most excellent results.

ULLATHORNE AND CO., Mechanical and Consulting Engineers, 63, QUEEN VICTORIA STREET, LONDON, E.C



EMMET'S

A1 PATENT BRICK MACHINE.

Massive; durable; cheap; takes little power, and gives PERFECT SATISFACTION.

This is the ONLY Machine which presses the Brick equally on BOTH sides, each plunger entering the mould plate ⅛ in., and turning out 12,000 SQUARE, SOLID, PRESSED Bricks per day, READY AT ONCE FOR THE KILN.

SOLE MAKERS—

YEADON AND CO.,

CROWN POINT FOUNDRY, LEEDS.

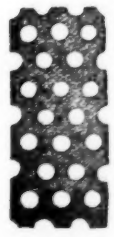
Makers of EVERY DESCRIPTION of Colliery and Brick Yard Plant.

LONDON AGENTS—
HAUGHTON AND CO., No. 122, CANNON STREET, E.C.
CONTINENTAL AGENTS—
PLAMBECK AND DARKIN, 171, QUEEN VICTORIA ST., E.C.

MANCHESTER WIRE WORK.

NEAR VICTORIA STATION, MANCHESTER.

(ESTABLISHED 1790).



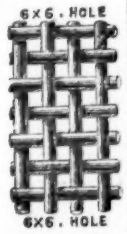
JOHN STANIAR AND CO.,

Manufacturers by STEAM POWER of all kinds of Wire Web, EXTRA TREBLE STRONG for

LEAD AND COPPER MINES.

Jigger Bottoms and Cylinder Covers woven ANY WIDTH, in Iron, Steel, Brass, or Copper.

EXTRA STRONG PERFORATED ZINC AND COPPER RIDDLES AND SIEVES.



Shipping Orders Executed with the Greatest Dispatch.

H. WATSON,

HIGH BRIDGE WORKS,

NEWCASTLE-UPON-TYNE.

MANUFACTURER OF EVERY DESCRIPTION OF

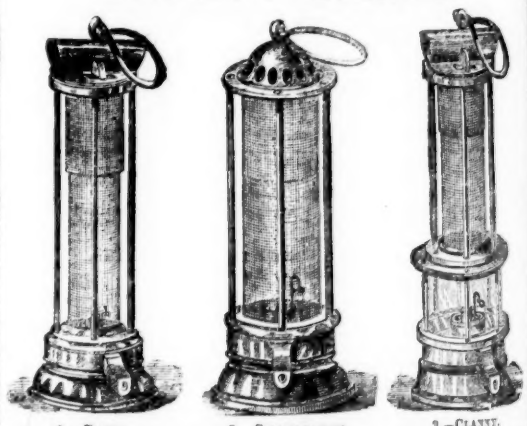
Engineering Fittings, Colliery Pump Working Barrels, Boiler Alarm Whistles, and Fire Engines.

IRON, COPPER, AND BRASS TUBING.

Gun Metal and Brass Castings of any size.

MALLEABLE BRONZE PRICKERS & BLASTING APPLIANCES.

SAFETY-LAMPS.



1.—DAVY. 2—STEPHENSON. 3.—CLANNY.

N.B.—The whole of these Lamps are made by workmen who have had great experience, and pass through a careful examination before being sent out.

I also SUPPLY BRASS, COPPER, and COMPOSITION STEMMERS and PRICKERS, as embodied in the Mines Regulation Act, and made of such lengths best adapted for Mining purposes.

MAPS OF THE MINES, AND OF UTAH TERRITORY.

FROISETH'S NEW AND REVISED MAP FOR 1875.—Size 40 by 56 inches, scale 8 miles to the inch. Handsomely engraved, coloured in counties, showing the Towns, Settlements, Rivers, Lakes, Railroads, Mining Districts, &c., throughout the Territory, and all the Government Surveys to date. Mounted on cloth, £2; half-mounted, £1 12s.; pocket form, £1.

Also, GENERAL MINING MAP OF UTAH, showing twenty-eight of the principal Mining Districts adjacent to Salt Lake City, and location of the most prominent mines. Price, pocket form, 6s.

Also, NEW MAP OF LITTLE AND BIG COTTONWOOD MINING DISTRICTS, showing the location of over Four Hundred Mines and Tunnel Sites, together with the Mines Surveyed for United States Patent. Price, sheets, 6s.; pocket form, 8s.

For sale, and supplied by—
TRUBNER and Co., 57 and 59, Ludgate Hill, London; or
B. A. M. FROISETH, Salt Lake City, Utah, U.S.

THE IRON AND COAL TRADES' REVIEW.

The IRON AND COAL TRADES' REVIEW is extensively circulated amongst the Iron Producers, Manufacturers, and Consumers, Coalowners, &c., in all the iron and coal districts. It is, therefore, one of the leading organs for advertising every description of Iron Manufactures, Machinery, New Inventions, and all matters relating to the Iron, Coal, Hardware, Engineering, and Metal Trades in general.

Offices of the Review: 7, Westminster Chambers, S.W.

Remittances payable to W. T. Pringle.

NOBEL'S DYNAMITE

Is the MOST ECONOMICAL and POWERFUL EXPLOSIVE for every kind of MINING and QUARRYING OPERATIONS; for blasting in hard or soft, wet or dry ROCKS; for clearing land of TREE ROOTS and BOULDER STONES; for rending massive BLOCKS of METAL; for SUBAQUEOUS and TORPEDO purposes; and for recovering or clearing away of WRECKS, &c.

ITS SAFETY is evidenced by the total ABSENCE OF ACCIDENTS in transit and storage; it is insensible to heavy shocks its GIANT POWER being only fully developed when fired with a powerful percussion detonator, and hence its great safety.

As a **SUBSTITUTE FOR GUNPOWDER** its advantages are the GREAT SAVING OF LABOUR, rapidity and INCREASE OF WORK done, FEWER and smaller BORE-HOLES required, greater depth blasted, safety in use NO DANGER FROM TAMPING, absence of smoke, unaffected by damp, &c.

For information, apply to the—

NOBEL'S EXPLOSIVES COMPANY (LIMITED), GLASGOW;

OR AT THE

London & Export Office, 85, GRACECHURCH STREET, LONDON, E.C.

DISTRICT AGENCIES:—

HENRY KITCHIN and Co., 14, Tangier-street, Whitehaven.
F. H. EDWARDS, Forth House, Newcastle.
ROBERT MORRISON, Zetland Buildings, Middlesborough.
ALBERT RICKETTS, Dean-lane, Bedminster, Bristol.
LEIGH AND SILLAVAN, 16, Old Corn Exchange, Manchester.
GEORGE ROBERTS, East End Villa, Lower Barton-street, Gloucester.
J. H. BEAN and Co., 6, Albion-street, Leeds.
WILLIAM RICH and SONS, Basset-street, Redruth.
CROSS BROTHERS, 21, Working-street, Cardiff.
G. WILLIAMS and SON, Baker street, Aberystwith.
WEBB and Co., Llanberis, Caernarvon.
J. T. EACHUS, Holywell.
JOHNSON and Co., Tower street, Dudley.
TODHUNTER and ELLIOT, Market-place, Douglas, Isle of Man.
J. C. AITKEN, 54, Bernard-street, Leith.
JOHN DONALD, 24, Belmont-street, Aberdeen.
WILLIAM WATSON, Main-street, Coatbridge.
ROBERT HAMILTON, Douglas-street, Dunfermline.
JOHN D. M'JANNET, Coney Park, near Denny.
CHARLES CUNNINGHAM, 81, Murray Gate, Dundee.
R. and J. CARSON 8 and 10, Corn Market, Belfast.
JAMES PIKE, 179, Strand Road, Merrion, Dublin.
CLOHERTY and SEMPLE, Merchants'-road, Galway.

FACTORY—ARDEER WORKS, STEVENSTON, AYRSHIRE.

LITHOFRACTEUR.

THE BEST EXPLOSIVE KNOWN FOR EVERY KIND OF QUARRYING, MINING, TUNNELLING, AND SUBAQUEOUS OPERATIONS,

UNRIVALLED FOR STRENGTH, SAFETY, AND FREEDOM FROM GASES.

EXPORT ORDERS DELIVERED FREE ON BOARD IN THE THAMES. PAMPHLETS ON APPLICATION.

Responsible Agents for the Country Districts can apply to—

KREBS BROTHERS AND CO., Sole Manufacturers and Patentees,

22, BASINGHALL STREET, LONDON, E.C.

WET GUN COTTON

Is perfectly uninflammable and insensible to the heaviest blows. It can only be fired in a bore-hole by using a special primer and detonator. Its strength is superior, weight for weight, to every known explosive, and it gives off no injurious taste or fumes.

Sold in cartridges ready for use in wet or dry ground at 1s. 6d. per lb.

PRIMERS AND DETONATORS SOLD SEPARATELY.

For further information apply to—

THE PATENT SAFETY GUN COTTON COMPANY, LIMITED,

STOWMARKET,

SOLE MANUFACTURERS OF ABEL'S GUN COTTON.

LONDON EXPORT OFFICE, 52, QUEEN VICTORIA STREET.

TONITE, OR COTTON POWDER.

THE SAFEST, STRONGEST, AND CHEAPEST OF ALL EXPLOSIVES.

Recommended to MINERS, PIT SINKERS, QUARRYMEN, and CONTRACTORS as the MOST EFFICIENT and ECONOMICAL BLASTING AGENT ever invented.

Results of practical experience show a saving of from 15 to 20 per cent. over the strongest explosives previously in use.

It saves labour in drilling holes, as a less number of holes are needed.

It does not require thawing, but is ready for use at all temperatures and in all climates.

It can also be advantageously used in breaking up boulders, extracting stumps, removing wrecks, exploding torpedos, and for submarine purposes in general, as well as for signal lights and fog signals for shipping.

OFFICES:

23, QUEEN ANNE'S GATE, LONDON, S.W.

WORKS: FAVERSHAM, KENT.

THE DARLINGTON ROCK BORER.

No VALVE—BLOW obtained by the movement of the PISTON.

IN USE IN FRANCE, GERMANY, SPAIN, AND ELSEWHERE.

Rock Borers, Air Compressors, and Electric Blasting Apparatus.

Sole Agents and Manufacturers for France.—The Blanzy Mining Company,

WHERE BORERS MAY BE SEEN IN OPERATION.

For letter of introduction, particulars, &c., apply to—

JOHN DARLINGTON,

2, COLEMAN STREET BUILDINGS, MOORGATE STREET, LONDON.

THE TUCKINGMILL FOUNDRY COMPANY

(TUCKINGMILL FOUNDRY AND ROSEWORTHY HAMMER MILLS),

CAMBORNE, CORNWALL,

Engineers, Iron and Brass Founders, &c.,

MAKERS OF EVERY DESCRIPTION OF

MINING MACHINERY, SHOVELS, GEARWORK, PUMPING, WINDING, AND STAMPING ENGINES.

ALSO OF

BLAKE'S STONE BREAKERS.

SOLE MAKERS OF

BORLASE'S PATENT ORE-DRESSING MACHINES AND PULVERISERS.

ESTIMATES GIVEN UPON INDENTS AND SPECIFICATIONS.

ILLUSTRATED CATALOGUES POST FREE ON APPLICATION.

LONDON OFFICE: 85, GRACECHURCH STREET, E.C.

"Kainotomon" Rock Drill

SELECTED BY THE

BRITISH, PRUSSIAN, & SAXON GOVERNMENTS.

SUPERIOR Air-Compressors, Coal-Cutters, Pumps, and all Mining Machinery.

Secondhand ROCK DRILLS, of BRYDON AND DAVIDSON'S make £25 each, new £32.

T. A. WARRINGTON,

30, King-street, Cheapside,

LONDON E.C.

THE

PHOSPHOR BRONZE

COMPANY (LIMITED).

139, CANNON STREET, E.C

LONDON.

Alloy, No, II., for pinions, ornamental castings, steem fittings, &c.	£120	per ton.
„ No. IV., for pinions, pumps, valves, linings, cylinders, &c.	130	„
„ No. VI. (must be cast in chill) for bolts, &c. This alloy has very great tensile strength ...	140	„
„ No. VII., for hydraulic pumps, valves, and plungers, piston rings, bushes and bearings, for steel shafts	140	„
„ No. XI., special phosphor-bronze bearing metal, wearing five times as long as gun metal	112	„

The prices of castings vary according to the pattern, the quantity required, and the alloy used.

WIRE ROPES, TUBES OF ALL DESCRIPTIONS, &c.

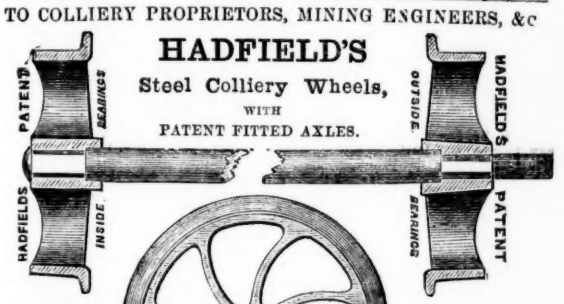
TO COLLIERY PROPRIETORS, MINING ENGINEERS, &c

HADFIELD'S

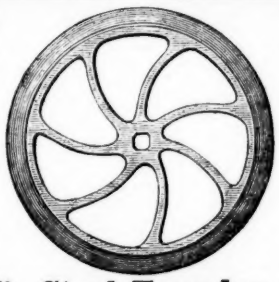
Steel Colliery Wheels,

WITH

PATENT FITTED AXLES.



ALSO, Hydraulic Cylinders, Pinions, Crossheads, Railway Crossings, Axle Boxes, Horn Blocks, &c.



Self-oiling Pedestals or Cods (PATENTED), Cage Guides, Incline Rollers and Pulleys, Barrow Wheels, &c.

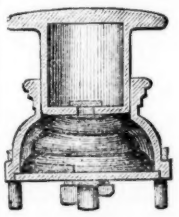
Hadfield's Steel Foundry Company,

MANUFACTURERS OF EVERY DESCRIPTION OF

CRUCIBLE CAST STEEL CASTINGS.

ATTERCLIFFE, SHEFFIELD.

THOMAS TURTON AND SONS,



MANUFACTURERS OF

CAST STEEL for PUNCHES, TAPS, and DIES

TURNING TOOLS, CHISELS, &c.

CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT and CRANK AXLES, SHAFTS and FORGINGS of EVERY DESCRIPTION.

DOUBLE SHEAR STEEL, BLISTER STEEL, SPRING STEEL, GERMAN STEEL, | FILES MARKED T. TURTON EDGE TOOLS MARKED WM. GREAVES & SON

Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.

SHEAF WORKS AND SPRING WORKS, SHEFFIELD.

LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C

Where the largest stock of steel, files, tools, &c., may be selected from.

JOHN AND EDWIN WRIGHT,

PATENTEES.

(ESTABLISHED 1770.)

MANUFACTURERS OF EVERY DESCRIPTION OF IMPROVED

PATENT FLAT AND ROUND WIRE ROPE

from the very best quality of charcoal iron and steel wire.

PATENT FLAT AND ROUND HEMP ROPES,

SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel wire), HEMP, FLAX, ENGINE YARN, COTTON WASTE, TARPAULING, OIL SHEETS, BRATTICE CLOTHS, &c.

UNIVERSE WORKS, MILLWALL, POPLAR, LONDON.
UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM.
CITY OFFICE, No. 5, LEADENHALL STREET, LONDON, E.

MR. W. F. STANLEY, MATHEMATICAL INSTRUMENT MANUFACTURER TO H.M.'S GOVERNMENT, COUNCIL OF INDIA SCIENCE AND ART DEPARTMENT, ADMIRALTY, &c.

MATHEMATICAL, DRAWING, and SURVEYING INSTRUMENTS of every description, of the highest quality and finish, at the most moderate prices.

Price-list post free.

ENGINE DIVIDER TO THE TRADE.

ADDRESS—GREAT TURNSTILE, HOLBORN, LONDON, W.C.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last wk.	Clos. pr.	Total divs.	For sh.	Last pd.
1500	Alderley Edge, c, Cheshire*	10 0 0	—	—	12 11 8	0 5 0	Jan. 1876
15000	Balmynheer, t, Wendron (4000 to is.)	1 0 0			0 2 0	0 2 0	Nov. 1875
30000	Bampfylde, c, t, mn., Devon*	1 0 0	1⅝	1⅝ 1⅝	0 2 0	0 2 0	June 1870
200	Botallack, t, c, St. Just§	119 5 0	25	25	619 15 0	5 0 0	Aug. 1872
4000	Brockwood, c, Buckfastleigh	1 16 0	1¼	1¼ 1½	3 16 0	0 2 0	Nov. 1875
2000	Bryn Alyn,* l, Denbigh. (10/. sh.)	8 0 0	7½	7 7½	0 7 0	0 7 0	Jan. 1877
3848	Cargoll, s., Newlyn	2 10 0			1 9 6	0 2 0	Aug. 1876
6400	Cashwell, l, Cumberland*		2¼	2 2¼	0 2 0	0 2 0	Aug. 1876
1000	Carn Brea, c, t, Illogan†§	56 7 6	37	35 37	308 0 0	1 0 0	Feb. 1874
2450	Cook's Kitchen, t, Illogan†§	28 9 9	3	2½ 3	11 17 0	0 7 6	Jan. 1873
10240	Devon Gt. Consols, c, Tavistock†*	1 0 0	5⅛	5 5¼	116 10 0	0 12 0	May 1872
4296	Dolcoath, c, t, Camborne	10 14 10	35	32 34	111 6 3	0 5 0	April 1877
8000	East Black Craig,* l., Scotland	5 0 0	5	4¾ 5	0 10 0	0 10 0	Feb. 1877
6144	East Caradon, c, St. Cleer†	2 14 6	1	¾ 1	14 19 0	0 2 0	Oct. 1872
300	East Darren, l, Cardiganshire	32 0 0			235 10 0	1 0 0	Aug. 1876
8400	East Pool, t, c, Illogan	0 9 9	10	9 10	15 0 3	0 2 0	Mar. 1877
2800	Foxdale, l, Isle of Man*†	25 0 0			82 5 0	0 10 0	Feb. 1876
40000	Glasgow Cara., c* (30,000 £1 p.. 10,000	15s. p.]	1¾	1 1¾	0 12 10	0 0 6	Mar. 1877
15000	Great Dyliffe,* l, Montgomeryshire	4 0 0	4	3 4	0 2 6	0 2 6	Apr. 1876
15000	Great Laxey, l, Isle of Man*	4 0 0	21	20 21	21 13 0	0 10 0	Apr. 1877
615	Great Retallack, l, bl, Perranzabuloe	5 18 6			0 1 6	0 1 6	May 1876
25000	Great West Van, t, Cardigan,* pref.	2 0 0	2½	2 2½	0 2 0	0 1 0	Aug. 1874
6400	Green Hurth, l, Durham*	0 8 0	2½	2¼ 2½	1 12 0	0 4 0	Oct. 1874
20000	Grogwinion, l, Cardigan*	2 0 0	4	3¼ 4½	0 12 0	0 4 0	Feb. 1877
9830	Gunnislake (Cliters'), t, c	5 5 0	2¾	2½ 2¾	0 13 9	0 1 0	Oct. 1876
1024	Herod-foot, l, near Liskeard†	8 10 0	4	3 4	62 5 0	0 15 0	Oct. 1872
18000	Hingston Down, c, Calstock*†	0 4 0	½	¾ ½	0 1 0	0 1 0	Nov. 1875
60000	Holmbush, a, c, s-l, Callington*	1 0 0	1¼	1¼ 1¼	0 1 6	0 0 6	April 1877
25000	Killaloe, s., Tipperary	1 0 0	—		0 3 11½	0 0 6	Mar. 1873
20000	Leadhills,* l, Lanarkshire	6 0 0	6¼	5½ 6	0 6 0	0 6 0	April 1877
400	Lisburne, l, Cardiganshire	18 15 0	80	75 80	581 10 0	1 0 0	May 1877
14000	Llanidloes,* l, Montgomery	3 0 0	3	2 3	0 9 0	0 4 6	Nov. 1876
5120	Lovell, t, Wendron	0 16 0	—		0 17 6	0 1 6	Jan. 1874
9000	Marke Valley, c, Linkinhorne	5 0 6	1⅛	1 1¼	7 15 0	0 2 0	Jan. 1876
9000	Minera Mining Co., l, Wrexham*	5 0 0	17	18 20	67 0 2	0 4 0	May 1877
20000	Mining Co. of Ireland, ci, c, l*	7 0 0	—		23 11 6	0 3 6	Jan. 1876
512	North Busy, c, Chacewater	3 8 6	3¼	3 3½	0 10 0	0 10 0	Dec. 1875
10289	North Hendre, l, Wales	2 10 0	—		1 7 6	0 2 6	Dec. 1876
2000	North Levant, t, c, St. Just§	12 2 0	—		4 13 0	0 12 0	Sept. 1873
27855	Old Treburgett,* s-l, ordinary shares	1 0 0	—		0 0 9	0 0 9	Feb. 1874
9258	Old Treburgett,* s-l (10 per ct. pref.)	0 10 0	⅜	⅛ ⅜	0 1 4½	0 0 6	July 1874
8000	Penhalls, t, St. Agnes	3 0 0	2¾	2½ 2¾	3 13 6	0 2 0	July 1875
6000	Pennant, l, bar, North Wales*	5 0 0	6	5½ 6	0 5 0	0 5 0	Mar. 1877
46793	Penstruthal,* t, c, Gwennap	2 0 0	⅛	⅛	0 2 8	0 0 8	Nov. 1875
12000	Phœnix, & W. Phœnix, t, c, Link.§	3 4 9	4¼	¾ ⅛	2 8 6	0 4 0	Nov. 1872
18000	Prince Patrick,* s-l, Holywell	1 0 0	2¼	1¾ 2¼	0 14 0	0 1 3	Jan. 1876
511	Providence, t, Lelant†§	21 6 7	—		104 12 6	0 10 0	Sept. 1875
13000	Roman Gravels, l, Salop*	7 10 0	12	10½ 11 xd	7 10 0	0 8 6	May 1877
512	South Caradon, c, St. Cleer	1 5 0	120	105 110	736 10 0	2 10 0	April 1877
6128	South Condurrow, t, c, Camborne†	6 5 8	85½ xd	8½ 8½	2 12 0	0 6 0	May 1877
12000	St. Harmon,* l, Montgom	3 0 0	3½	3¼ 3¾	0 3 0	0 3 0	Jan. 1877
10000	St. Pr. Patrick,* s-l. (8000 sh. issued)	1 0 0	—		0 7 0	0 1 0	Oct. 1875
12000	Tankerville, l, Salop*	6 0 0	7½	6½ 7	4 17 0	0 5 0	Dec. 1876
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	17½	16 17	50 8 6	0 5 0	May 1877
15000	Van, l, Llanidloes*	4 5 0	35	33 35	2 15 6	0 16 0	April 1877
3800	W. Chiverton, l, Perranzabuloe†	12 10 0	16	13 15	55 0 0	0 10 0	Jan. 1877
1788	West Poldice, St. Day	10 0 0	13	11 13	1 19 0	0 4 0	July 1876
512	West Tolgus, c, Redruth	95 10 0	62	60 62	19 15 0	1 0 0	April 1877
2048	West Wheal Frances, t, Illogan	28 1 3	3	2 3	3 12 6	0 5 0	Oct. 1872
12000	West Wye Valley,* l, Montgomery	3 0 0	3½	3¼ 3⅝	0 6 0	0 3 0	Nov. 1876
512	Wheal Basset, c, Illogan†§	19 2 8	13	11 13	638 10 0	1 10 0	Aug. 1872
1024	Wheal Eliza Consols t, St. Austell	20 0 0	—		13 0 0	1 0 0	May 1877
2048	Wheal Jane, t, Kea	2 13 10	1½	1¼ 1½	8 5 0	0 5 0	July 1877
4995	Wheal Kitty, t, St. Agnes	5 4 8	2½	2 2½	11 19 6	0 2 6	Dec. 1877
2500	Wh. Newton, a,c,s,t, Harrowbarrow*	1 0 0	3	3	0 0 6	0 0 6	April 1875
80	Wheal Owles, t, St. Just§	86 5 0	140	130 140	522 10 0	4 0 0	Aug. 1875
6000	Wheal Prussia, t, Redruth	2 0 0	4¾	4½ 4¾	0 3 0	0 2 0	Dec. 1872
25000	Wicklow c, sul, t, Wicklow	2 10 0	2	1⅞ 2	52 9 0	0 2 6	Mar. 1874
10000	Wye Valley, l, Montgomery*	3 0 0	3½	3¼ 3¼	0 10 6	0 0 6	Oct. 1876

FOREIGN DIVIDEND MINES.

35500	Alamillos, l, Spain*†	2 0 0	2	1½ 2	1 17 3	0 1 0	Mar. 1877
30000	Almada and Tirito Consol., c*†	1 0 0	⅜	⅛ ⅜	0 6 3	0 1 0	May 1876
20000	Australian, c, South Australia†	7 7 6	2¼	1¾ 2¼	0 18 0	0 2 6	Aug. 1876
10000	Battle Mountain,* c, (8240 part pd.)	5 0 0	—		0 10 0	0 10 0	Nov. 1872
15000	Bird-eye Creek, g, California*	4 0 0	⅝	⅜ ⅝	0 14 0	0 2 6	June 1874
12320	Burra Burra,* c, So. Australia	5 0 0	—		70 0 0	0 10 0	Oct. 1872
20000	Cape Copper Mining,*† So. Africa	7 0 0	37	34 38	27 15 0	1 0 0	Mar. 1877
40000	Cedar Creek, g, California*	5 0 0	⅝	⅜ ⅝	0 5 0	0 2 6	June 1878
15000	Chicago, c, Utah*	10 0 0	3½	3 3½	2 8 0	0 4 0	Nov. 1876
65000	Colorado United, s-l, Colorado*†	5 0 0	1¾	1¾ 1¾	0 13 6	0 4 0	Jan. 1876
10000	Copiapo, c, Chili (£20 shares)	16 15 0	—		7 11 5	0 3 0	May 1877
100000	Don Pedro North del Rey*†	0 16 0	½	¾ ½	2 6 9	0 2 0	Mar. 1872
28500	Eberhardt and Aurora, s, Nevada*†	10 0 0	7½	7 7½	1 8 0	0 3 0	Dec. 1876
70000	English and Australian, cl S. Aust.	2 10 0	1½	1¼ 1½	2 15 9	0 1 0	Mar. 1877
30800	Flagstaff, s, Utah*	10 0 0	2¾	2¾ 2¾	4 2 0	0 5 0	July 1873
25000	Fortuna, l, Spain*†	2 0 0	6¾	5¾ 6¼	6 9 2	0 6 8	Mar. 1877
55000	Frontino & Bolivia, g, New Gran.*†	2 0 0	2½	2¼ 2¾	0 1 0	0 1 0	June 1876
30000	Gold Run, hyd.	1 0 0	—		0 2 4	0 0 4	Oct. 1872
68000	Kapunda Mining Co. Australia†	1 3 0	—		0 2 4	0 0 6	June 1873
20000	Last Chance, s,* Utah	5 0 0	¾	¾ ¾	0 14 0	0 2 0	July 1873
15000	Linares, l, Spain*†	3 0 0	6¼	5¾ 6¼	16 17 2	0 9 0	Mar. 1877
65000	London and California, g*†	2 0 0	¾	⅛ ¾	0 1 0	0 1 0	July 1875
7837	Lusitanian, Portugal*† (£5 shares)	3 10 0	—		1 11 6	0 1 6	Mar. 1873
5000	Mammoth Copperopolis of Utah, c, s	10 0 0	—		0 5 0	0 5 0	Dec. 1872
5000	Mountain Chief, s, Utah*	10 0 0	—		0 4 0	0 4 0	Jan. 1873
12000	Prussian Mining & Ironworks, ci, i.	30 0 0	—		6 0 0	3 0 0	July 1873
10000	Pontgibaud, s-l, France†	20 0 0	27	25 27	23 1 1	1 11 1	Nov. 1876
100000	Port Phillip, g, Clunes*†	1 0 0	⅝	¾ ⅝	1 8 0	0 1 0	Jan. 1877
54000	Richmond Consols, s, Nevada*†	5 0 0	7	6½ 7	3 9 0	0 7 6	Oct. 1876
40000	Santa Barbara,* c, Brazil	0 10 0	2¾	1¾ 2¼	0 3 9	0 1 3	May 1877
120000	Scottish Australian Mining Co.*†	1 0 0	1⅞	1⅜ 1⅞	17½ per cent.		Nov. 1876
80000	Scottish Austral. Mining Co., New	0 5 0	⅜	⅜ ⅝	17½ per cent.		Nov. 1876
112500	Sierra Buttes, g, California*†	2 0 0	2	1¾ 1¾	1 16 0	0 2 0	Oct. 1876
40000	South Aurora, s, Nevada*	5 0 0	—	¼	0 14 2	0 2 0	Nov. 1873
853000	St. John del Rey*† (£5 stock and multiples dealt in)		300	320	½ year ...20 p. ct. for Dec.		1876
20000	Tolima, g, s So. America	5 0 0	—		0 11 6	0 6 6	May 1874
28000	Victoria (London)*, g, Australia	1 0 0	—		0 11 10½	0 0 10	Aug. 1876
15000	Western Andes, s,* New Granada	5 0 0	—		12 per cent. per an		July 1876
21300	W. Prussian (3500 pref. sh. 10/. paid)	10 0 0	11¼	10¾ 11¼	1 4 0	0 8 0	April 1877

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
20000	Anglo-Australian, g, Victoria*	2 10 0	—		Fully pd.
5000	Anguilla Phosphate, West Indies (4000 issued)	10 0 0	—		Fully pd.
12000	Argentine, g, Argentine Republic	5 0 0	4¼	4¼ 4¼	Fully pd.
10000	Australian Central, g* (also 6000 deferred shares)	1 0 0	—		Fully pd.
3000	Bellavista, s, Peru* (£10 shares)	10 0 0	—		Fully pd.
30000	Blue Tent, hyd., California	5 0 0	—		Fully pd.
35000	Cesena Sulphur Company, Romanga, Italy*	10 0 0	3¼	3 3¼	Fully pd.
50152	Chontales, g, s, Nicaragua*†	2 0 0	—		Fully pd.
16000	Condes of Chili, s-l	5 0 0	⅜	⅛ ⅜	Fully pd.
38000	Excelsior Hydraulic Gold Washing Co., California*	6 0 0	4	3½ 4	Fully pd.
100000	Exchequer, g, s, California*†	1 0 0	—		Dec. 1871
40000	Holcombe Valley, g,* California	1 0 0	⅛	⅛ ⅛	Fully pd.
8000	Hornachos,* s-l, Spain	10 0 0	—		July 1873
20000	Imperial Brazilian Collieries, Brazil*	5 0 0	15	14½ 15	Fully pd.
100000	I. X. L., g, s, California*	1 0 0	—		Fully pd.
60000	Javali, g, Nicaragua*	2 0 0	¼	⅜ ⅛	Fully pd.
3500	La Manche, l, Newfoundland	10 0 0	⅛	⅛	Fully pd.
12800	Lanestosa,* l, s, Viscaya, Spain (£2 shares)	1 15 0	—		Fully pd.
75000	Malabar, g, Colombia* (67165 issued)	1 0 0	—		Mar. 1876
40000	Malpaso, g, Colombia* (7400 pref. shares, fully paid)	1 0 0	⅞	½ ⅞	Fully pd.
12000	Menzenberg, c, Honnef, Germany*	5 5 0	¾	⅝ ¾	Fully pd.
4588	New Bensberg, s, l, Germany	5 0 0	—		Fully pd.
66000	New Quebrada, c, Venezuela*	5 0 0	par		Nov. 1876
20000	New Zealand Kapanga, g, Coromandel*	5 0 0	2¼	2 2½	Fully pd.
3000	Oregon,* g, Oregon, U.S. (preference shares)	4 0 0	1¾	1¼ 1¾	Fully pd.
80000	Panulcillo, c, Chili*† (£80000 debentures)	4 0 0	4¼		Sept. 1875
80000	Pestarena United, g, Italy*†	3 0 0	1⅛	1 1⅛	Fully pd.
80000	Providencia and New Rosario, s, Mexico*	1 0 0	⅜	⅛ ⅜	Fully pd.
50000	Rica, g, Colombia* (40000 issued)	1 0 0	—		Fully pd.
2,181,000	Rio Tinto,* c, Huelva, Spain	Stock	¼	⅛ ¼	Fully pd.
100000	Rosea Grande, g, Brazil*† (£1 shares)	0 19 0	⅛	⅛	July 1872
30000	Russia Copper, Orenburg and Ufa*†	10 0 0	2¼	1¾ 2¼	Fully pd.
25000	San Pedro, c, Chili*	2 0 0	¾	⅛ ¾	Fully pd.
10000	Silver Plume, s, Colorado*	1 0 0	—		Fully pd.
30000	Tecoma, s, Utah*	10 0 0	⅛	⅛ ⅛	Fully pd.
20000	Thornhill Reef, g, Australia*	1 0 0	—		Fully pd.
42174	United Mexican, s, Mexico*†	28 15 3	2¼	2 2¼	May 1876
15000	Utah, g, s-l, Utah*	5 0 0	—		Fully pd.
75000	Yorke Peninsula, c, South Australia	1 0 0	⅜	⅛ ⅜	Fully pd.
40000	Yorke Peninsula, c, South Australia Preference	1 0 0	1	¾ 1	Fully pd.

§ Have made calls since last dividend was paid.

FOREIGN AND MISCELLANEOUS STOCKS, BONDS, LOANS, AND TRUSTS.

	Closing Prices.	
Argentine, 1868, 6 per cent.	69	70
Bolivia, 6 per cent.	20	22
Brazilian, 1865, 5 per cent.	90	92
Chilian, 1866, 7 per cent.	101	104
City of Providence, 5 p.c. coupon bonds	99	101
Egyptian, 1864, 7 per cent.	68	72
Do., 1868, 7 per cent.	47	50
Do., 7 per cent., V.M.L.	61	74
Do., 9 per cent. guar.	70	75
Do., 7 per cent., K.M.L.	38	40

	Closing Prices.	
Foreign and Col. Gov. Trust, 6 p. cent.	60	65
Do., 5 per cent., 2d issue	45	50
Do., 6 per cent., 3d issue	48	54
Do., 1872, 4th issue	45	50
Do., 1873, 5th issue	47	52
Peruvian, 1870, 6 per cent.	14½	15¼
Do. 1872, 6 per cent.	12½	13
Russian, 5¼ per cent. L. Mort.	67	72
Spanish, Quicksilver Mort. 5 p. cent.	88	91
United States Mort., 6 per cent.	91	93

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last wk.	Clos. pr
40000	Aberdaunant, l, Llanidloes*	1 0 0	1⅜	1⅛ 1⅜
10000	Aberystwith,* s-l, Cardigan	5 0 0	—	
7800	Alvig, & Burng.,*t, St. Aust.	3 0 0	3	2½ 2¾
18000	Ambrose Lake, t, c, Liskeard	1 18 6	—	
12000	Assneton, l, Carnarvonshire*	5 0 0	1¾	1¼ 1¾
50000	Ballycummisk,* c, Schull	2 0 0	—	
12000	Bedford United, c, Tavistock	1 19 6	⅛	⅜ ⅛
28000	Belstone,* c, Devon (27,000 fy. pd.)	1 0 0	2¾	2¼ 2¾
15000	Blaen United,* s-l, Cardigan	1 0 0	—	
3937	Blue Hills, t, c, St. Agnes	3 7 6	—	
30000	Bodidris,* l, bl, Denbighshire	1 0 0	1¾	1½ 1¾
1000	Bollihope Vale,* s-l, Durham	5 0 0	5½	5½ 6
2000	Bowden Hill,* mn	1 0 0	—	
6000	Bradwell Moss Rake	1 0 0	1	⅞ 1
80000	Caldbeck Fells, l, Cumberland*	2 0 0	—	
15000	Cathedral, t, c, Gwennap*	1 10 0	1½	1 1½
20000	Central Foxdale, l, I. of Man*(2/. sh.)	1 5 0	—	
10000	Central Van,* l, bl, Llanidloes	5 0 0	—	
128	Clementina, l, Llanrwst	20 0 0	50	40 50
7500	Combellack,* t, Wendron	2 0 0	3	2½ 3
6000	Combmartin, s-l, North Devon	0 6 0	⅝	½ ⅝
24000	Court Grange, s-l, (6000 sh. 10s. pd.)	1 0 0	1⅛	1 1⅛
20000	Cwm Dwyfor,* c, s-l, Carnarvonsh	0 15 0	—	
6000	Cwm Lanarch,* s-l, Carnarvon	5 0 0	5	5 5½
3000	Cwmystwith (New) [5/. shares]	4 0 0	—	
512	D'Eresby Mountain, l, bl, Llanrwst.	20 0 0	25	20 25
10000	Denbighshire Consolidated, l*	3 0 0	3½	1½ 2
12000	Derwent,* l, Durham	4 0 0	3½	2¾ 3¼
656	Ding Dong, t, Gulval	53 9 6	—	
10000	Dubby Syke, l, Durham*	0 12 6	⅛	⅜ ⅛
4000	East Chiverton, l, Perranzabuloe	6 14 6	2½	2 2½
6000	East Goginan, l, Cardigan	2 0 0	—	
18300	East Van, t, Llanidloes*	5 0 0	5¼	5 5¼
20000	Elgar,* s-l, Cardiganshire	1 0 0	1¼	1 1¼
5000	Frank Mills, l, Christow	5 6 0	⅝	⅛ ⅝
8000	Fronvellan, c, Mont.* [4000 sh. fy p.l.]	1 0 0	—	
3950	Gawton, c, Tavistock	4 3 6	⅜	⅛ ⅜
12000	Glan Clwyd,* l, Gwyddelwern	1 0 0	—	
14000	Glenroy,* s-l, Isle of Man	4 0 0	1⅛	⅜ 1⅛
10000	Glyn,* l, Llanidloes	2 0 0	1⅜	1⅛ 1⅜
12000	Goginan, & Level Newydd, Card., l	2 10 0	—	
100000	Gold, c, Merionethshire	1 0 0	—	
20000	Goreu,* s-l, Carmarthen	1 0 0	1¼	1⅛ 1¼
7500	Gorsedd and Merllyn Cons., l, Flint	2 10 0	5½	5 6
20000	Gt. E. Foxdale, l, I. of Man (1/. sh)	0 18 0	—	
9500	Great Pant-y-Pydew, l, Holywell	2 0 0	—	
6000	Gt. Wheal Eleanor, t, North Bovey	1 0 0	3	2 3
18000	Grosvenor, l, Holywell (£1 sh.)	0 15 0	—	
10000	Harehope Gill,* l, Durham (£1 sh.)	0 5 0	—	
6400	Harwood,* l, Durham	0 15 0	¾	⅝ ¾
5000	Hush Elsteddfod Minera,* l	2 0 0	—	
200	Islay,* l, Scotland	28 0 0	—	
8000	Killifreth, t, Chacewater	2 1 0	½	⅜ ½
25300	Kingston Con., s-l, Stoke Climsland	1 0 0	—	
12000	Ladywell,* l, Salop	2 10 0	1⅜	⅞ 1⅛
12000	Ditto, 10 per cent. pref., 1/. each	0 5 0	⅜	¼ ⅜
2500	Levant, c, t, St. Just	9 6 6	—	
25000	Llanrhaidr, l, Montgomery*	2 0 0	—	
30000	Llanrwst,* l, Carnarvon	2 0 0	4	3¾ 4
15000	Llwyn Teify,* s l, Cardigan	1 0 0	—	
65000	Medlyn Moor, t, Wendron	1 17 4	2	2
10000	Mellanear Copper, Hayle*	1 0 0	—	
10000	Melyndw- l, Carmarthen*	3 0 0	—	
11000	Monydd Gorddu, l, Cardigan*(Red.)	5 0 0	4	3 4
12000	Mount's Bay, c, Marazion	1 0 0	—	
25000	Nant-y-Ronen, s-l, Cardigan*	1 0 0	—	
15000	Nascent Copper*	1 0 0	—	
12000	Neptune,* c, Perranuthnoe	0 5 0	—	
6000	New Bronfloyd,* l, Cardigan (5/. sh.)	3 0 0	—	
20000	New Consols, s,a, Stoke Climsland*	3 0 0	—	
8000	New Dolcoath, t, c, Camborne*	5 0 0	1¾	1⅝ 1¾
20000	New East Foxdale, s-l, Isle of Man	0 15 0	—	
15000	New Fowey Consols, t, St. Blazey*	3 0 0	2	1½ 2
1492	New Hendra, t, Breage	3 9 0	1¼	1⅛ 1¼
3200	New South Merllyn, l, Flint*	2 10 0	2	1 2
5000	New Wheal Emma, c, Buckfastleigh	2 0 0	—	
4000	North Cornwall, l, Cornwall	5 0 0	5½	5 5¼
17000	North Laxey,* Isle of Man	2 0 0	¾	⅝ ¾
20000	North Prince Patrick,* l, Holywell	1 0 0	1¼	1 1¼
5936	North Treskerby, c, St. Agnes	3 17 10	—	
2000	North Wheal Towan, t, c, Illogan	1 19 6	—	
2500	Old Tincroft, c, t. Lelant*	4 0 0	4	3 4
6400	Oola Hills,* s-l, Limerick	5 0 0	—	
12000	Pandora,* l, Carnarvon	2 0 0	—	
16923	Parys Mountain,* c, Anglesea	3 0 0	¼	⅜ ½
4000	Pateley Bridge, l, Yorkshire	5 0 0	2½	2 2½
6000	Pedn-an-drea Consols, t, Redruth	5 0 0	7	6¾ 7⅛
12000	Pennerley, l, Shropshire*	2 0 0	½	⅜ ½
30000	Perkins Beach, l, Shropshire	1 0 0	1¾	1 1¼
12000	Plynlimmon, l, Llanidloes*	2 0 0	⅛	⅜ ⅛
648	Polrose, t, Breage	21 0 0	—	
10000	Port Nigel,* s-l, Carnarvonshire	2 0 0	2½	2 2½
2000	Prideaux Wood, t, Llanivery	5 0 0	—	
12800	Prince of Wales, c, Calstock	2 2 0	3s.	2s. 3s.
10000	Red Rock,* l, Cardigan	2 0 0	2¼	2 2½
6000	Relistian Consols, c, Gwinear	0 10 0	⅝	½ ⅝
15000	Rookhope, l, Durham*	1 10 0	1⅞	⅞ 1
3000	Russell, s-l, Swymbridge	0 8 0	—	
5000	Silvercross,* c, t, Marazion	1 0 0	¾	½ ¾
4200	Snowbrook, s-l, Montgomery	5 0 0	5¾	5⅛ 5¾
6000	So. Cwmystwith, l, Cardiganshire	2 0 0	3½	3¼ 4
8000	South Darren, l, Cardigan*	1 10 0	—	
512	South Dolcoath, c, t, Redruth	12 5 0	1¼	1 1¼
18000	South Roman Gravels, l*	1 10 0	⅞	⅝ ⅞
6000	South Roskear, t, c, Camborne	6 10 0	5	4 5
6000	South Tolcarne, t, c, Camborne	1 14 0	¾	½ ¾
937	South Wheal Crofty, c, Illogan	37 0 10	11	10 11
4560	South Wh. Frances, c, Illogan†	7 4 4	¾	½ ¾
432	Spearn Moor, t, Penzance†	46 17 9	—	
8000	St. Lawrence, Amal., l, Flintshire*	2 0 0	—	
10000	St. Patrick, l, Halkin, Holywell*	1 0 0	1⅜	1⅛ 1⅜
6000	Success, &c., l, Derb./12,000/. called)	1 0 0	—	
18000	Sunnyside,* l, Durham	2 0 0	2½	2 2½
30000	Talybont,* s-l, Talybont	1 0 0	2¼	2 2½
6400	Teesdale,* l, Durham	1 0 0	1	¾ 1
14000	Teign Valley, l, bar., Bridford	1 0 0	—	
10000	Temple, l, Cardigan*	1 0 0	1¼	1 1¼
10000	Tolgus Consols,* c, Redruth	5 0 0	5½	5 5¼
12000	Treheigh Consols, s-l, St. Ive	0 9 0	½	⅜
5000	Treleigh Wood, t, Redruth	5 16 0	—	
547	Treryon Consols	15 0 0	⅝	½ ⅝
12000	Trethellan, s-l, Crantock*	2 0 0	—	
2564	Trumpet Consols, t, Helston§	13 0 0	—	
640	Truro*, l, Nerquis, Flintshire	10 0 0	10	10
10000	Tyn-y-Fron,* l, Cardigan	1 0 0	1¼	1 1¼
25000	Unity Wood, t, c, Kenwyn	4 8 6	⅛	⅜ ⅛
20000	Van Consols, l, Llanidloes*	2 10 0	1⅞	1¾ 2
12000	West Assheton, l, Carnarvon	1 0 0	1	¾ 1
6000	West Basset, c, Illogan†§	5 6 8	3	2½ 3
20000	West Bryn Celyn,* l, Flintshire	1 0 0	—	
5500	West Combmartin, s-l, North Devon	1 0 0	1	⅞ 1
7000	Ditto	0 2 6	⅛	⅛ ⅛
3000	W Craven Moor, l, Pateley Bridge*	10 0 0	13	11 12
5000	West Godolphin, t, c, Breage	2 6 0	3	2 3
12000	West Goginan,* Cardiganshire	2 0 0	¾	½ ¾
15000	West Great Work, t, Breage*	2 0 0	2¼	2½ 2¾
10000	West Llangynog, s-l, Montgomery	2 0 0	—	
12000	W. Maria & Fortescue, t, c, Lamer	4 14 0	⅜	¼ ⅜
3000	West Mary Ann, l, Menheniot	0 3 6	⅛	⅛ ⅛
50000	West Milwr, s-l, Flint	1 0 0	—	
20000	West Pateley Bridge, l, Yorkshire	1 0